

Modules



CUBASE
VST



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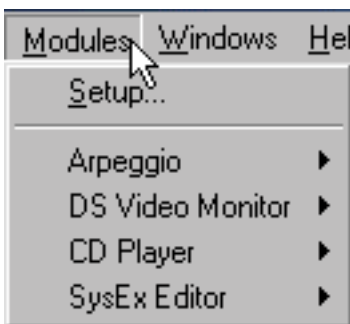
Modules – Activating and Using

Handling Modules

Since primary memory (RAM) sometimes is limited, and one user's needs differs from another, certain parts of the program are handled as "modules", files that can be loaded in and "thrown out" at will.

Nine modules are included with Cubase VST: The MIDI Processor, the Arpeggiator, the CD-Player, the DS Video Monitor, Rocket Network module, the SMPTE Display, the Style Tracks module, the Studio module and the SysEx Editor (described in a separate document, called System Exclusive Handling). Depending on which version of Cubase VST you use, other modules may be included. Other modules may also be available from your Steinberg dealer. For more information about these optional modules, see their respective documentation.

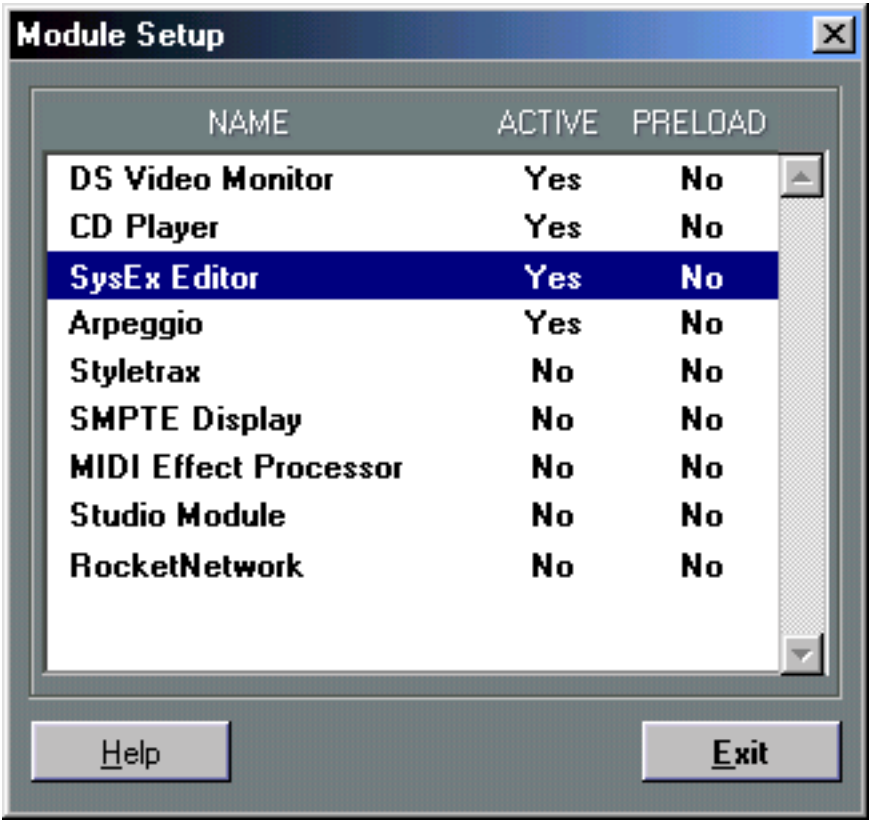
Modules are handled from the Modules menu, which allows you to activate, deactivate and open Modules.



- Which items are available on this menu varies, depending on which modules are activated in the Setup dialog.

When no modules are activated, "Setup..." is the only menu item.

Setup...



This menu item opens the Module Setup dialog, which consists of a list with three columns. The list contains all modules that currently are in the MODULES directory on your hard disk.

- **To add or remove modules from the list, quit Cubase VST and move the module files in or out of the MODULES directory.**
Adding a module to the list is not the same as activating (loading) it, it only means making it available for activating.

The columns

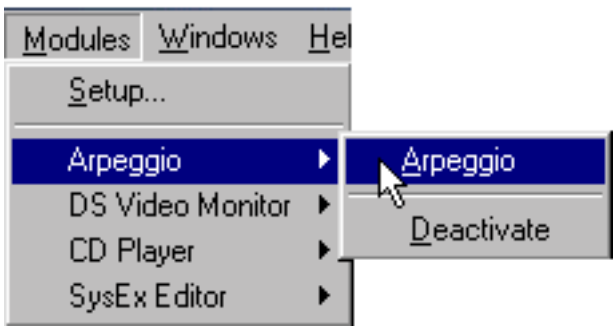
Name	The name of the module.
Active	This column shows if the module is activated (ready for use in the program). Click in the column to activate a module ("Yes") or deactivate it ("No").
Preload	If this column shows "Yes", the module will be loaded automatically when the program starts. Click in the column to activate or deactivate Preload for each modules.

- **When you have activated the modules you want, and made settings for Preload, click Exit to close the dialog.**
The modules you have activated appear on the Modules menu.

Opening a Module Window

If a module is activated in the Setup dialog or Preloaded, it appears as an item on the Modules menu. To open the module's window, proceed as follows:

- 1. Pull down the Modules menu.
- 2. Position the pointer on the module's name.
A submenu with two or more items appears.



- 3. Select the module name from the submenu.

Some modules may have several options on this submenu. In such cases, refer to the manual for information on how to launch it.

Deactivating a Module

You may deactivate an active module without opening the Setup dialog. Proceed as follows:

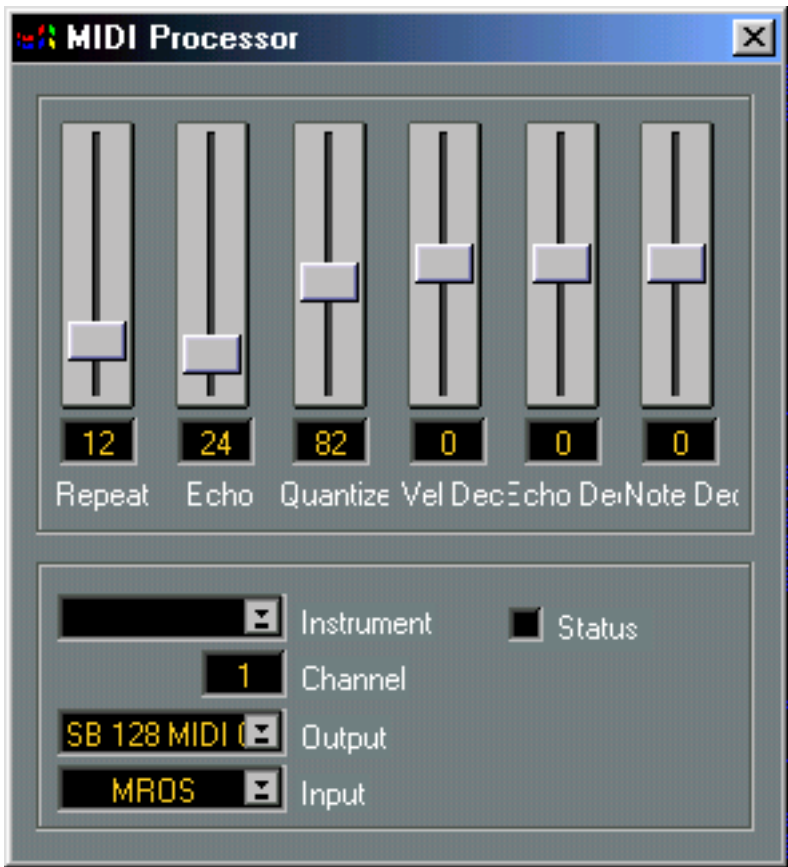
- 1. Pull down the Modules menu.
- 2. Position the pointer on the module's name.
A submenu with two or more items appears.
- 3. Select "Deactivate" from the submenu.
The module is removed from the Modules menu. To activate the module again, use the Setup dialog as described above.

The MIDI Processor Module

The MIDI Processor

This module is Cubase VST's MIDI equivalent to a regular sound signal processor. It can produce echo, chorus and pitch-shifting type of effects, plus a lot of things you can't do with a normal signal processor.

- ❑ Before you open the MIDI Processor, turn off Remote Control in the “Remote Setup” dialog (opened from the Options menu).



Turning the MIDI Processor On and Off

This is done by ticking/unticking the Status box.



- ❑ The MIDI Processor can be active even if its dialog box is closed.

Input



The MIDI Processor takes MIDI data coming in from somewhere, and generates new data according to the settings of the sliders. The data can come from any Input. You select this with the Input pop-up menu in the lower left corner of the dialog box.

Taking the Input Data from the MIDI In Port

- **Set Input to the interface to which your controlling MIDI instrument is connected.**
Now, the MIDI processor will use anything you play on your MIDI instrument and change it according to the settings of the sliders.

Using Already Recorded Music as Input

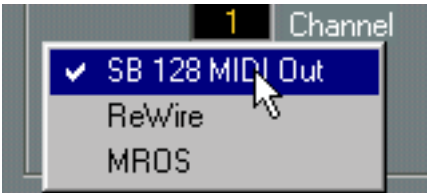
You may also “process” MIDI data already recorded on a Track:

1. **Go to the Arrange Window.**
2. **Set the Output value for the desired Track to “MROS”.**
3. **Open the MIDI processor and set Input to “MROS”.**

M•ROS is the invisible MIDI cable that runs inside Cubase VST. Performing the above mentioned steps, is the same as connecting the output of the Track to the input of the MIDI processor, as with a MIDI cable.

- **You may use more than one Track for input to the MIDI processor.**

Output, Channel and Instrument



Use the Output pop-up to direct the output of the MIDI processor. You can specify an Output port and a MIDI Channel, define an Instrument etc., as in the Track List.

Sending the Processed MIDI Data to a MIDI Output Port

- **Set Output to the port to which you want to send out the processed MIDI data.**
Now, the MIDI Instruments connected to this port will receive the processed MIDI data.

Sending the Processed MIDI Data back into Cubase VST

- 1. Set Output to MROS.**
- 2. Open the MIDI Setup dialog (from the Options menu) and make sure MROS is activated as an Input.**

This will output the data from the MIDI processor to the recording input of Cubase VST, allowing you to re-record processed Tracks or process data while you record it.

Setting the Output MIDI Channel

This is simply the MIDI Channel that the data will be sent out on. If you set this to "Any" the data will be sent out on the same MIDI Channel(s) as the data is coming in on.

About the Instrument Value

The Instrument value is a combination of a certain Output and a certain MIDI Channel and a Patchname Source. You can select any previously defined Instruments with the Setup Instrument dialog, or define a new one.

Using the Sliders

You can change the values for each slider in the following ways:

- **By dragging the "handle".**
- **By clicking somewhere on the slider.**
The handle will jump to where you clicked.
- **By changing the numeric value in the box below the slider.**
You may use the mouse buttons, or double click and type in a value.

The changes take effect immediately, and you can use this to "play" the MIDI processor (and even record your "playing").

The Parameters

Repeat

The Repeat value is the number of echoes (1 - 64) you get from each incoming note.

Echo

The Echo value is the initial time between delays in ticks. Each unit on the slider corresponds to eight ticks according to the table:

Echo value	Number of ticks	Note Value
192	1536	One bar
96	768	One half note
48	384	One quarter note
24	192	One eighth note
16	128	One eighth note triplet
12	96	One sixteenth note
8	64	One sixteenth note triplet
6	48	One thirty-second note
4	32	One thirty-second note triplet
3	24	One sixty-fourth note

Quantize

Quantize moves the repeated notes to the closest set value (1 unit = 8 ticks).

Vel Dec

This parameter allows you to add or subtract to the velocity values for each repeat so that the echo fades away or increases in volume. Make sure your sound (or sound source) is velocity sensitive.

Echo Dec

This parameter allows you to add or subtract a number of ticks from the echo value for each repeat. This leads to echoes that arrive more and more (or less and less) often, like the sound of a bouncing ball.

Note Dec

The Note Dec parameter allows you to construct arpeggios and harmonies by subtracting or adding some number to the note value for each repeat.

Closing the MIDI Processor

When you are done with the settings, close the dialog box by clicking the close box.

☐ This does not turn off the MIDI Processor, it just hides the dialog box.

Arpeggiator

The Arpeggiator

With this module, you can create arpeggios by pressing chords on your MIDI keyboard. The module contains not one, but four arpeggiators which run simultaneously. Each of the four arpeggiators can have its own settings for input/output, MIDI channel, type of arpeggio etc.

The arpeggiator can be played in real time and you can record its output to any MIDI track in Cubase. You can also use a recorded track as an input to the arpeggiator.

About the Easy and Expert modes

There are two main modes for the Arpeggiator, Easy and Expert, and you switch between them with a button at the bottom of the window. We suggest you start out in Easy mode while you first try out the Arpeggiator.

On, Edit, Input, Save and Load

In the top left corner of the Arpeggiator you will find a section that looks identical regardless of the Easy/Expert Mode switch:

To the left you will find four activity indicators with a checkbox and a radio button below each one.

- **When you put a check mark into a field in the “On” row, the corresponding Arpeggiator will be activated.**
- **The “Edit” radio buttons are used to select an Arpeggiator to view and make settings for in the window.**

It is possible to have all four arpeggiators turned on at the same time (checked), but only one can be selected for editing.

To the right of the checkboxes you will find the Input pop-up menu. This is where you select the source of MIDI input to the arpeggiator. The MROS alternative is used to route the output of a track to the arpeggiator (explained in detail below). The input setting applies to all of the four arpeggiators.

The two buttons below the Input pop-up are used to Load and Save Arpeggiator settings, see later in this chapter.

Easy Mode Settings

The following settings are made separately for each one of the four arpeggiators in Easy Mode:



Output section

Program

Selects a program in your sound source. This is identical to the Patchname field in the Track/Part-Inspector of the Arrangement window.

Output

The MIDI output for the selected arpeggiator. The MROS setting is used to record the arpeggio into a track in Cubase (explained below).

Instr

If you have defined an Instrument in the Setup Instruments dialog, you can direct your arpeggio output to this instrument.

Channel

This is the output MIDI channel of the selected arpeggiator.

Arpeggio Settings Section

Mode

This pop-up menu sets the arpeggio mode.

Mode:	Description:
Normal	This is the normal up/down arpeggio.
Invert	This inverts the arpeggio when the top note is reached.
Down	A repeating arpeggio downwards.
Up	A repeating arpeggio upwards.

Quantize

This parameter sets the “speed” of the arpeggio. Since it always plays at the same tempo as Cubase VST, this is specified as a note value.

Octaves

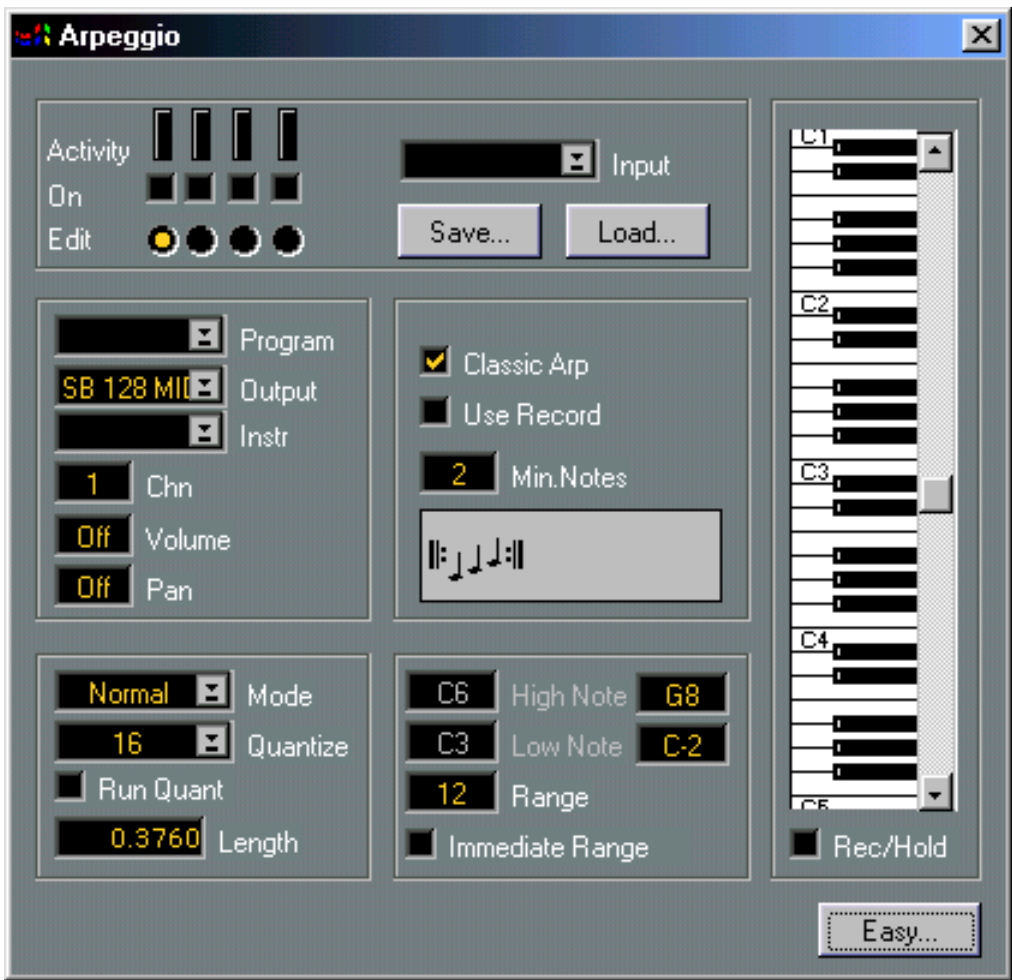
This sets the range of the Arpeggio to a number of octaves starting with the lowest note you press on your MIDI keyboard. A setting of 1 gives you a range of one octave, counted upwards from the lowest note you press.

Length

Sets the length (in ticks) of the output notes.

Expert Mode Settings

In this mode there are significantly more possibilities and options.



Output Modules

Program, Output and Instrument

See Easy mode, above.

Volume

This is the volume value that will be used by the sound playing from the selected arpeggiator. This is exactly the same as setting a Volume in the Inspector.

Pan

This panning value will be used by the sound playing from the selected arpeggiator.

Main Arpeggiator Settings

Classic Arp

- When this box is checked the arpeggiator behaves as in Easy mode, which means it performs a classic arpeggio that plays the notes you press up and down repeatedly through the range set in the Range or High/Low note boxes.
- When the box is unchecked you can set the arpeggio characteristics in the "Sort Box" below.

Use Record

With this function activated, the Arpeggiator uses the notes "recorded" in the Rec./Hold section (the keyboard) as input to the arpeggiator, instead of real-time input from a MIDI keyboard or a track. To use it, follow the steps below:

1. Check the "Use Record" box.
2. Click the Rec./Hold button so that it gets highlighted.
3. Press the keys you want to record on your MIDI keyboard.
4. Click the Rec./Hold button again to deactivate it.

5. Play a key on your MIDI keyboard.

The arpeggiator will now play a transposed arpeggio based on the notes on the onscreen keyboard, beginning at the note you pressed on your MIDI keyboard.

If you want to change chords "on the fly", proceed like this:

1. Click the Rec./Hold button while you're still holding down the key on the MIDI keyboard.
2. Release the key on the MIDI keyboard and play the new chord.
3. Release the chord and click the Rec./Hold button to deactivate it.
4. Press a key on the MIDI keyboard to trigger the new chord.

Min Notes

When "Use Record" is unchecked, this parameter sets the minimum amount of keys that have to be pressed for the arpeggio to start.

The Sort Box

The Sort Box is a graphical description of the arpeggio. It becomes "greyed out" when Classic Arp is checked. The number of notes in the graph represent the number of different notes in the arpeggio. The pitches of the notes in the graph represent the relative pitch of each note in the arpeggio. The pitch range of the notes is C1 to A2 (treble clef), but please note that these are not absolute pitches, but relative ones. The actual pitches produced by the arpeggiator depends on which notes you play on your keyboard.

You can add, delete and move notes up/down with the mouse buttons. Clicking a note with the right mouse button will raise the pitch one "step". The left button lowers the pitch until the lowest pitch is reached.

- Clicking with the left mouse button on a C1 (the lowest possible pitch) deletes that note and all following notes.
- Clicking a note with the right mouse button while holding the [Alt] key will produce an arrow that changes the pitch one half tone. Repeated clicks will switch the arrow up/down.
- [Alt]+left mouse button deletes the arrow.

Mode

This pop-up menu sets the arpeggio mode.

Mode:	Description:
Normal	This is the normal up/down arpeggio.
Invert	If Classic Arp is unchecked this inverts the arpeggio when the top note is reached.
Down	A repeating arpeggio downwards. Only works in Classic Arp mode.
Up	A repeating arpeggio upwards.

Quantize

See Easy mode above.

Run quant

This function will quantize the arpeggio output to the song position, when Cubase is running. If you want the arpeggio to run “in sync” with Cubase, activate this.

Length

Sets the length (in ticks) of the output notes.

High/Low Note

This is only available when the Range switch is set to its lowest value – Off. It sets the maximum range of the arpeggio notes.

Range

When this is set to anything but Off, it determines the range to a number of notes starting with the lowest note you press on your MIDI keyboard. A setting of 12 gives you a range of one octave, counted upwards from the lowest note you press.

This corresponds to the Octave setting in Easy mode.

Immediate Range

This function only works when Classic Arp is unchecked. When Immediate Range is checked the arpeggio immediately jumps to the nearest note inside the set range when a chord is pressed. If unchecked, the arpeggio will start at the pressed key and work itself into the set range and then stay there.

Recording An Arpeggio Into A Cubase Track

1. Open the MIDI Setup dialog box and make sure that “MROS” is active in the “Input From” pop-up, in addition to your MIDI interface(s) Inputs.
 2. Set the arpeggiator input to receive data from your MIDI interface. Set all arpeggiator outputs that you want to record, to “MROS”.
 3. Make the Arrange window active and activate recording.
 4. Play the desired chords on the keyboard.
-
- ❑ If the arpeggio outputs are set to different MIDI channels, be sure to set the MIDI channel for the recorded track to “Any” if you want to keep the channel assignments when playing back.
-

Using A Cubase Track As Input To The Arpeggiator

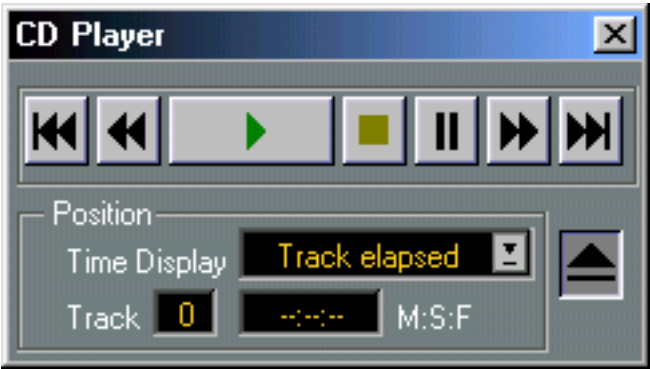
1. Set the desired Tracks to output to “MROS”.
2. Set the arpeggiator Input to “MROS”.
3. Start Playback.

Loading and Saving Arpeggiator settings

The Load and Save buttons allow you to save Arpeggiator settings to disk, as individual files. When you load an Arpeggio file, the settings in the file replace the settings you have now.

CD Player

The CD Player



This utility allows you to play back audio CDs from your CD-ROM drive. You already have at least one such utility, included with Windows, but this one provides a couple of features that make it more convenient to record from sampling CDs into Cubase VST.

Inserting and Ejecting the CD

When you insert a CD, it is automatically detected by the CD Player, if Cubase is in Stop mode. When Cubase is playing, CDs are not recognised.

If you have problems detecting CDs this might be because your drive requires a very long time to detect the CD after the door has been closed. If this happens, you can open a file called `cdplayr.ini`, located in the Cubase Modules folder, and change the `LOAD_DELAY` value. This value is normally set to 200, which equals 2 seconds.

The Transport Controls

The CD Player window contains the normal controls for Eject, Play, Stop, Pause, Rewind, Fast Forward and move to next/previous Track.

However, by using keyboard modifiers together with Fast Forward and Rewind you get more control over CD position than is normally available, as described in the table below:

Key Modifier:	Description:
None	Move one frame back/forward
[Shift]	Move ten frames back/forward
[Control]	Move one second back/forward
[Shift]+[Control]	Move ten seconds back/forward

In addition to this, if you keep the mouse button pressed over one of the buttons, winding accelerates.

The Position Displays and Controls

Time Display pop-up

This allows you to select between a number of options for the Time Display.

Time Display

This shows the current time, as specified in the pop-up above.

Track

This shows you which Track is playing. You can also use it to select any Track on the CD. Double click on the value and type in the desired number.

DS Video Monitor

What is DirectShow?

DirectShow, a part of DirectX Media, is an extension to Windows that allows you to play back movies in a window on your computer.

The DS Monitor module supports DirectShow, which means that you can have video playing on your screen, synchronized with Cubase VST's playback.

What can I do with DirectShow in Cubase VST?

- You can open any movie files of the AVI, MOV or QuickTime format and play it on your screen, synchronized with Cubase VST's playback.

Playing a movie in sync with Cubase VST

Activating the DS Video Monitor Module

1. Open the Module Setup dialog on the Modules menu.
2. Click once in the Active column for the DS Video Monitor.
The Module is activated.
- If you click in the “Preload” column, the DS Video Monitor will always be loaded when you startup Cubase.
3. Click Exit to close the dialog.

Adding the Movie to the Song

1. Pull down the Modules menu and select “Open Movie” from the DS Video Monitor sub-menu.
A standard file dialog appears.
2. Locate the movie file and click OK.
The movie appears in a separate window.

Playing back



1. Pull down the Modules menu and select “Options” from the DS Video Monitor submenu.
2. Make sure that the “On Line” option is activated.
3. Activate playback in Cubase VST.
The movie will play back in sync, starting at the top (Bar 1) of the Cubase Song.

☐ The audio is not played back when you play the Movie from within Cubase VST.

Setting an Offset

If you don't want the movie to start at the first Bar of the Cubase Song, you can define an Offset value. Proceed as follows:

- 1. Select Options from the DS Video Monitor submenu on the Modules menu.**
- 2. In the Offset value field you can specify a new start position for the movie file.**
The value is in time code format (hours: minutes: seconds: frames). If you for example set this to 00: 01: 00: 00, the movie will start exactly one minute from the beginning of the Song.

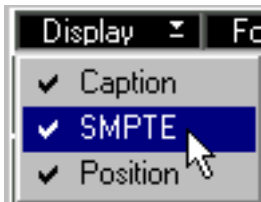
SMPTE Display Module

The SMPTE Display



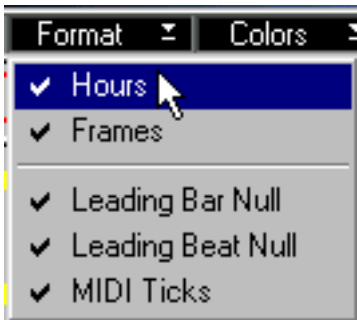
This menu item brings up a window displaying the Song Position in large digits. The window shows the Song Position as Time Code and/or Meter position. There are three pop-up menus for setting up the SMPTE display:

Display



- **Caption**
When this is deactivated (not ticked), the title and menu bars of the window are hidden.
- ☐ **To get the title and menu bars to reappear, double click on the window.**
- **SMPTE**
When this is ticked, the Song Position is shown as Time Code.
- **Position**
When this is ticked, the Song Position is shown as Meter Position.

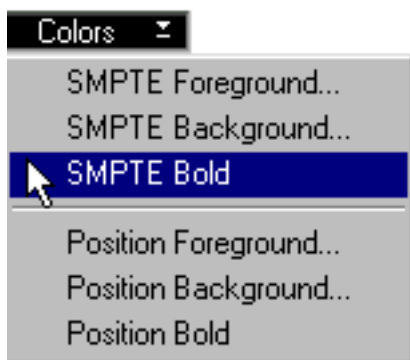
Format



- **Hours**
When this is ticked, the hour is included in the Time Code.

- **Frames**
When this is ticked, the frames are included in the Time Code.
- **Leading Bar Null**
When this is ticked, zeroes are shown before the bar figure in the Meter Position.
- **Leading Beat Null**
When this is ticked, zeroes are shown before the beat (quarternote) figure in the Meter Position.
- **MIDI Ticks**
When this is ticked, the last figure (ticks) is shown in the Meter Position.

Colors



- **SMPTE Foreground...**
Defines the color of the Time Code figures.
- **SMPTE Background...**
Defines the Time Code background color.
- **SMPTE Bold**
When this is ticked, bold letters are used for the Time Code.
- **Position Foreground...**
Defines the color of the Meter Position figures.
- **Position Background...**
Defines the Meter Position background color.
- **Position Bold**
When this is ticked, bold letters are used for the Meter Position.

Resizing the display

You may use conventional Windows procedures to move and change the size of the display. If both SMPTE and Meter Position are shown, you can drag the divider between the fields up or down to make one of the fields larger.



Closing the display

- If you want to close the SMPTE Display window, just double click as usual on the control menu button in the upper left corner of the window.
- If you want to keep the SMPTE Display on the screen while you are working with Cubase VST, just activate another window (e.g. the Arrange Window) by clicking on it.

Style Tracks – Using Style Tracks

What are Style Tracks?

Style Tracks are Tracks of a certain Track Class, containing predefined, complete accompaniment patterns, called Styles. As described in the Handling Modules chapter, Style Tracks become available if you activate the Styletrax module. Using Style Tracks, you can easily create music in a wide range of styles, either in real time or by predefining the chord changes. The program lets you “play along”, controlling chords and variations of the Style Track accompaniment with one hand and soloing or playing melody lines with the other. The advanced real-time control together with the different chord recognition algorithms makes it possible to “play” Style Tracks like instruments of their own.

Included with the program are a number of Styles of different types. These can be loaded and played back with a minimum of fuss. Furthermore, you've got full editing capabilities at hand, to modify the Style Track or create new Styles from scratch.

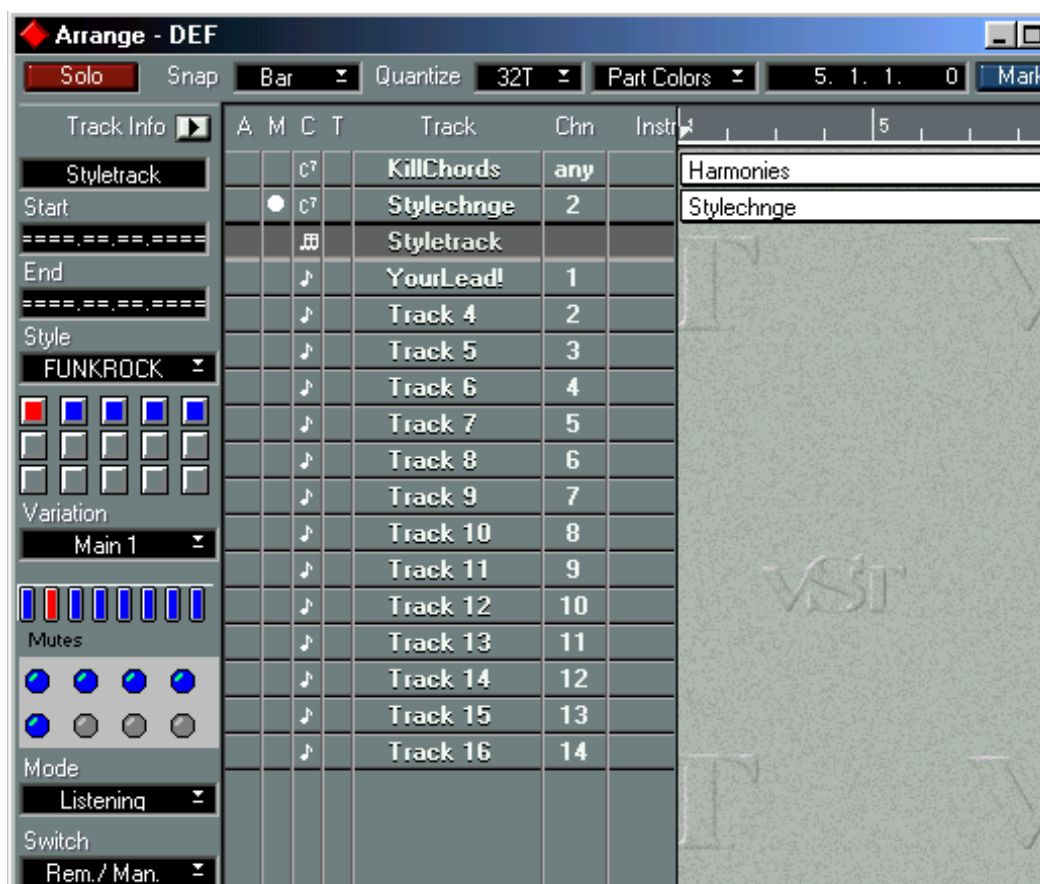
Using Style Tracks - a guided tour

This chapter lets you get started with Style Tracks, using the demonstration Song that comes with the program.

The description below assumes you have a General MIDI compatible sound source connected to the first MIDI interface on your Output list. If you don't, you have to redefine the Instrument Map, see [page 47](#).

1. Open the "Style Demo" Song on the Cubase VST CD.

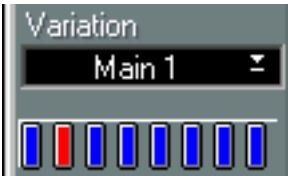
Make sure that the “Styletrack” is selected, so that the Style Inspector is displayed.



2. If you have a General MIDI compatible module, make sure it is set to its General MIDI Mode.
Actually, Cubase VST can do this for you, from the Style Track editor. This is described on [page 44](#).

Playing the Style Demo Song

1. This song will play a “Style” called FunkRock as soon as you hit Play in Cubase VST.
2. By playing chords in the two octaves above the lowest (on a normal 60 note synth keyboard) you can make the accompaniment follow your chord changes.
The program recognizes most common chords including, 7ths, Sus 4s, different 9ths, diminished and augmented chords, etc.
3. Using the first eight keys on the lowest octave of your keyboard you can switch between different “Variations”.
You will note the Variation pointer jumping between the available Variations in the style.
Variation 1 is an intro, variation 7 is a break and variation 8 is an ending.



In this example, Variation2, Main 1, is selected.

- You can also select a variation by clicking directly on it in the Inspector.
4. If you select the Track "Your Lead!", you can use the upper part of the keyboard to play a melody on MIDI Channel 1.
If you have a General MIDI Sound Module, this will probably be set to play a Piano, but that can of course be changed to any sound you like, using the front panel of the instrument or the Program Change field in the "Your Lead!" Track's Inspector area.
5. If you select the Style Track again, you can use the Style Select buttons to select a new style.
Five Styles are loaded into the Style Demo Song.



The button of the selected Style has a different color than the other buttons.

Loaded, but not selected Styles.

Empty slots (no Style loaded).

Playback with predefined chords

Cubase VST can also follow a set of predefined chord changes. On the Track "KillChords" an eight bar chord change has been recorded:

1. **Select the Style Track again, so that the Style Inspector reappears.**
2. **Use the Mode pop-up menu to set the Style Track to Slave.**
This Mode forces the Style Track accompaniment to follow the chord changes from any playing Chord Track(s).



3. **Use the Style pop-up menu to select the Style FunkRock.**
4. **Activate Playback again.**
The music now plays the chords in the Chord Track.
5. **When you are done listening to the chord changes, return the Mode pop-up menu to "Listening".**

Playback with predefined Style and Variation changes

A Chord Track may also contain recorded Style and Variation changes (described on [page 56](#) in this chapter). The Style Demo Song has one Chord Track named StyleChnge, which contains Style and Variation changes.

1. **Unmute the "StyleChnge" Track.**
If you want to have chord changes as well, check that the "KillChords" Track is unmuted and the Mode pop-up menu in the Inspector is set to "Slave" (for the Style Track).
 2. **Play the Style Track as usual.**
The recorded Events on the "StyleChnge" Track will make the Style Track switch Styles and Variations.
-
- ❑ **The Style Track accompaniment will "always" follow any Style and Variation changes recorded on a Chord Track (if it's not muted), no matter if the Mode parameter is set to "Slave" or "Listening". The Mode parameter only determines whether the Style Track should follow recorded "Chord"s or not.**
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How Styles and Style Tracks work

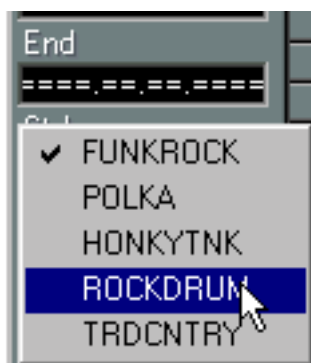
The following pages introduce you to some of the theory behind Styles and Style Tracks.

Style Tracks

The music that comes out of Style Tracks is made up of two things:

- The current Style (including its variations).
- The chord input (via MIDI, or from a Chord Track).

The Style Track contains the definition of how the music should be played. There can only be one Style Track in each Arrange window. The Style Track differs from other Cubase VST Tracks in that it has no Parts. Instead it contains a number of Styles, listed on the Style pop-up menu.



A Style Track has some settings, so in a way it can be edited, by selecting Edit from the Edit menu or by pressing [Control]-[E] on the computer keyboard. See [page 43](#) in this chapter.

The Inspector and Style Tracks

As outlined above, the Inspector has a pretty special functionality for Style Tracks. It should rather be thought of as a panel for setting how the Style Track should "behave". It can, as all things in Cubase VST, be operated during playback, so that changes can happen as the music is playing. Some of the changes can even be recorded onto a Track in Cubase VST.

Styles

Styles are instructions on how to play a certain type of music, over a number of bars. For example, a style may contain a jazz bass line and a jazz piano riff, each over four bars. These lines can be modified on the fly, by the computer, to fit a certain chord or chord change.

Each Style comes in a number of Variations. When you have selected a Style you can pull down a Variation pop-up menu in the Inspector to see the variations for this style. There are a number of ways to select variations, using the mouse or via MIDI.

How Cubase VST analyses your input for the Style Track

So, a Style is a predefined phrase of music using one or more instruments. To make it play the way you want it, you must input a chord. This can be done by playing a MIDI keyboard (playing the full chords or using a number of "one finger" techniques). It can also be done by defining the chords in advance, by entering them into a Chord Track.

Chord types

In Listening mode (when you play the entire chord on the keyboard), Style Tracks recognizes all of the most common three, four and five note chords. Even more complex chords, that Style Tracks doesn't already "know" about, it is still able to – at least partly – analyse and "understand".

Exactly what effect the chords you play have on the Style is individual for each Style and can be changed using a number of settings, in the Style Edit window.

Play Modes

There are a number of ways to play the chords, described in full on [page 39](#). Listening mode (where you play the full chords on the keyboard) has already been touched upon. There are also four different "one-finger" modes, described in full on [page 63](#).

Inversions and chord recognition

If you have Listening mode selected, you play the full chords on the keyboard. You must play more than two notes, or the program will not recognize your playing as a chord. Always include the fifth.

If there is any ambiguity as to what chord you are playing, the program selects the one it thinks is the closest. It looks at the lowest note and guesses that this is the root note. To for example get a C6 chord recognized as just that, make C the lowest note, not A, since the program would then interpret it as an Am7.

If the chords you play are only used to control Style Tracks, you should always use the simplest form of the chord. But if you have Thru turned on in the Style Track editor, your chord playing will also be thruput directly via MIDI. If this is the case, you may want to play more complex version of the chords (added octaves etc). Normally, the program handles this without problems.

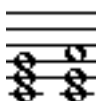
Transposing up or down

When moving from one chord to another, you may want the program to transpose upwards or downwards. This can be controlled by your playing, within reasonable limits.

- If you play the new chord in its simplest inversion with the root note as the lowest note, Style Tracks will transpose upwards (if possible). For example, to go from C “up” to Am, play this:



- If you play the new chord in any other inversion, the program will transpose downwards (if possible). For example, to go from C down to Am, you could play this:



Edit window

If you select a Style Track in the Arrange window and select “Edit” from the Edit menu or press [Control]-[E] on the computer keyboard, the Style Track Edit window appears. In the Edit window (described on [page 43](#)) you can make a number of settings that govern how you control Style Tracks and how the Styles play.

Chord Tracks

Chord Tracks contain Chord information. You can either use Cubase VST's editing tools to enter the chords, or you can convert a MIDI recording to Chord information on a Chord Track. See [page 56](#).

This completes the theory section. Now let's take a look at how you actually use the Style Tracks!

Playing Style Tracks

Preparing

To prepare for playing a Style you need to follow these steps:

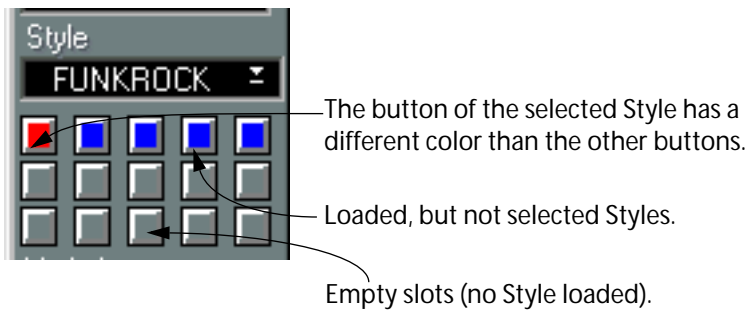
- 1. **Create a Style Track.**
This is done by creating a Track as usual, and changing its Track Class to Style Track, using the “C” column.
- ❑ **You can only have one Style Track in each Arrangement.**
- 2. **In the Inspector, activate the Style Track by setting the Mode pop-up menu in the Inspector to anything but Off.**
Don't select Slave unless you have a Chord Track.



Selecting Styles

There are two ways to select Styles from the Inspector:

- Pull down the Style pop-up menu and choose one of the available Styles.
- or
- Click on one of the filled buttons below the pop-up menu.



- ❑ Clicking on one of the buttons that are “empty” will bring up the “Load Style” dialog, allowing you to load a new Style into the empty slot (see below).
- ❑ Arrange windows that are open, or Set Aside on the Windows menu will also appear in the Style list. These can only be selected using the pop-up menu, not the buttons.

Loading Styles

To load a ready-made Style (or one that you have previously created and saved yourself), proceed like this:

1. **Click on an empty Style button.**

A file selection dialog appears.

2. **Select a file and open it.**

Style files are normal Arrangements, but some data in the file is ignored when it is loaded as a Style (the Notepad, the Master Track, etc).

Saving

When you save your Song all the Styles are saved with it. You can also save Styles individually, see [page 44](#).

Removing Styles

If you hold down [Alternate] and click on a Style select button, this "slot" is emptied.

Selecting Play Modes

To determine how a style should be used, you select one of the different Play Modes, from the Mode pop-up menu in the Inspector:



Off

Simply turns the Style Track off completely.

Slave

Makes the Style Track play the chords present on the Chord Track. See [page 56](#).

Listening

In this mode, Cubase VST interprets the chords you play on the keyboard and uses this information to select a chord for the Style.

Please note that it is not the actual chord you play that is used, but rather the name of the chord that Cubase VST "extracts" out of your playing. For example, it doesn't matter if you add an extra octave note or a root bass note, etc. No matter how you play it, the chord is interpreted as a major chord, and it is this interpretation that affects the Style Track.

- **However, it does matter in what inversion you play the chord, as described on [page 36](#).**

Easy

In this mode, you simply press one finger on the keyboard, and the program decides itself which chord should be used, and if it should be major or minor, etc. Exactly how these decisions are made by the program, is determined by the Easy Mode Scale and Easy Mode Key settings in the Style Track Edit window (see [page 45](#) in this chapter).

Roland

Same as above, but uses the "one-finger" (or actually two-finger) system used on Roland keyboards. See [page 63](#) for details.

Yamaha

Same as above but for Yamaha, JVC and Technics keyboards. See [page 64](#).

Casio

Again same as above but for Casio and Hohner keyboards. See [page 64](#).

Tempo

If the Master button on the Transport bar is "deactivated", Cubase VST will use the Tempo stored in each Style. If you wish to set a Tempo yourself, activate the Master Track, open the Master Track editor and change the tempo.



The Tempo stored in the Style is used.



The Tempo set in the Master Track is used.

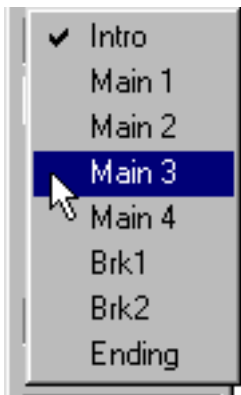
Selecting Variations

Each Style comes with a number of variations. The Steinberg Styles always follow the same rules:

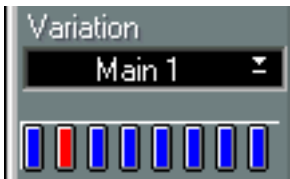
- Generally, there are eight Variations.
- Variation number 1 is always an Intro. This is always automatically followed by Variation number 2.
- Variation number 7 is always a "break". When this variation has played to its end, the program automatically returns to the variation that played before the break. (This does not apply in Random Select mode – see below – or when Play Snap is set to off – see [page 51](#).)
- Variation number 8 is always an Ending. When this has played to its end, the program stops.

There are several ways to manually select a Variation (the Switch parameter in the Inspector should be set to "Rem./Man."):

- **The Variations are always available on a pop-up menu in the Inspector. Use this pop-up menu to select a Variation.**



- If there are 8 Variations "or less" in the Style, the Variations also appear as buttons below the pop-up menu. Click on one of them to select it.



- If there are more than 8 Variations, they instead appear like this, where you can scroll through the numbers to select them.



Selecting Variations via MIDI



- If the Switch parameter in the Inspector is set to "Rem./Man.", you can use your MIDI keyboard or other controller as a remote control, to select Variations via MIDI.
- If you set the Switch parameter to "Ext. Cntrl", you can use MIDI Control Change messages, like modulation wheel, Data Entry slider etc, to change Variations.

Both these features are described on [page 53](#) in this chapter.

Using Velocity Switch to select Variations

When the Switch parameter in the Inspector is set to "Vel. Switch", the amount of velocity you use to play the keys on the keyboard (when selecting chords) is used to determine which variation will be used. If you use the one finger chord modes, you can use the same single finger to select both chords and variations!

Random switching

Two Switch settings in the Inspector allow the "computer" to select Variations:

- **Random**
When you select this option, the program switches between the variations automatically, at random.
- **Random-Mix**
As Random, but the program also mixes between the Tracks. For example this may result in the bass playing variation 3 at the same time as the piano is playing variation 5.

The Style Track editor - an overview

Opening the Style Track editor

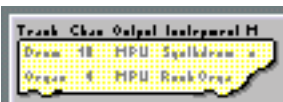




1. Select the Style Track.
2. Select “Edit” from the Edit menu or press [Control]-[E] on the computer keyboard.
The Style Track Edit window is opened.



The five modes of the Style Tracks editor

The editor window can be switched between five different modes, depending on what you need to use it for. This is done by clicking on one of the five Mode icons or by selecting one of the items on the Edit menu:

Each of the five modes is described separately later in this chapter, but here is a brief explanation of their purpose and functions (each mode is shown with its icon):

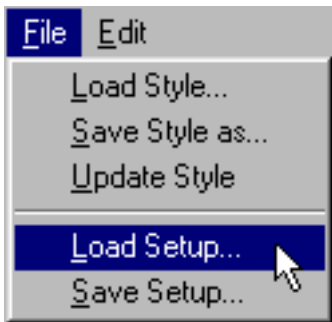
Tracklist		Shows the Tracks that make up the Style, and the settings for them. See page 45 .
GM Map		In this mode, you set up the Map, i.e. the set of sounds that should be available to the Styles. See page 48 .
Settings		This mode gives you access to various parameters, determining how the Track will play the Style. See page 50 .
Remote		In this mode you make settings for remote control of Variations, etc. See page 53 .
Styles		This mode works like the Style Buttons in the Inspector. Here, you can load, select and examine Styles to be edited. See page 56 .

Parameters common to all Modes



The upper part of the Edit window contains parameters that do not change when you switch Edit Mode. From left to right they are:

The File menu



- **Load Style**
This loads a regular Arrange window as a Style and puts it on the Style pop-up menu. (More about loading and saving Styles on [page 61](#).)
- **Save Style As...**
This item allows you to save the selected Style as an Arrangement file. This way you can “extract” Styles from a Song, and use them in other Songs.
- **Update Style**
Select Update Style if you have made changes to a Style in the Style Track Edit window, and want to permanently save them to disk. This includes all the settings you can perform for each Track in the Style.
- **Load Setup/Save Setup**
This loads/saves the Style Tracks settings as a Style Track Setup file (see [page 61](#) under the heading “How are the other settings stored?”). These settings are independent of the Styles themselves.

The Mode, Variation and Style pop-ups

These pop-up menus duplicate the Mode, Variation and Style pop-ups in the Inspector (described on pages [39](#), [41](#) and [38](#) in this chapter).

The GM Reset button

Pressing this button sends out a MIDI message putting General MIDI compatible instruments into their General MIDI mode. All Steinberg styles are built to automatically use the intended sounds when played back on General MIDI, Roland GS and Yamaha XG compatible instruments.

The Scale and Chord display fields



These two fields cannot be changed by hand. Rather, they show which chord is used (either one played by you, or a chord from a Chord Track), and the scale the program uses (based on the input chord and the Scale Preference value set in the Param. Mode).

Tracklist Mode

TRACK	CHN	OUTPUT	INSTRUMENT	M	PRG	BANK	TRAN	VEL	VOL	MODE	MUTE	LOWER	UPPER
Drum	10	SB 128 MIDI	Standard Drum	X	124	Off	0	0	Off	Normal		C0	C3
Bass maj	5	SB 128 MIDI	Slap Bs. 2	X	38	Off	0	0	Off	Transp. 2		C0	C3
Acc1 maj	6	SB 128 MIDI	Piano 1	X	1	Off	0	0	Off	Slaved		C0	C3
Acc2 maj	7	SB 128 MIDI	Brass 1	X	62	Off	0	0	Off	Transp. 2		C0	C3
Acc 3	8	SB 128 MIDI	Muted Gt.	X	29	Off	0	0	Off	Transp. 2		C0	C3

In this mode you can make a number of settings for the Style which are stored with it when you save it (for more information on what is in a Style file, see [page 61](#) in this chapter).

Track

This is just a display value which shows the Track's name as defined in the Arrangement where the Style was created.

Chn

This value is normally picked from the original Track in the Arrangement where the Style was created.

When Mapping (the "M" column, described on [page 47](#)) is off, this is simply the MIDI Channel for the Track, for direct setting. When Mapping is on, changing the Chn value may have some further implications, as described on [page 49](#) in this chapter.

Output

- When Mapping is on (see [page 47](#)), this value is fixed. However, it might change automatically when you select a new Instrument, see below.
- When Mapping is off, this is simply the MIDI Output for the Track, for direct setting.

Instrument

This is only available when Mapping (see [page 47](#) in this chapter) is on. When it is, this field displays a pop-up menu with all the Instruments in the Map. When you select one, the Track is set to the MIDI Output, Program Change, Bank Select and the MIDI Channel of the Instrument chosen.

Whether the MIDI Channel is changed or not depends on how the Channel value is set in the Map, see below.

M (Mapping)

This field is used to decide if the settings for the Track should follow the current map or not, as described on [page 47](#) in this chapter. A star in the column indicates that Mapping is turned on.

Prg (Program)

- When Mapping is on, changing this value is the same as selecting from the Instrument column.
- When Mapping is off, this value is used to directly select a Program for the Track.

Bank

- When Mapping is on, this value is fixed. However, it might change automatically when you select a new Instrument, see above.
- When Mapping is off, this is used to select a Bank in your MIDI device.

Tran (Transpose)

This value allows you to transpose the output from the Track, just as you can change the transposition in the Inspector for a normal MIDI Track. This parameter is not affected by Mapping.

Vel (Velocity)

This is just as Transpose, but instead it affects the velocity value just as the Velocity setting in the Inspector. This function is not affected by Mapping.

Vol (Volume)

This allows you to give the Track a certain MIDI Volume, just as with the Volume setting in the Inspector. This value is not affected by Mapping either.

Mode

When you click in this column, a pop-up menu opens where you can select one of the available modes. The selected mode governs how the Track should respond to chord changes. Find more info on what the modes do on [page 71](#) in this book.

Mute

This column is used to Mute the Track temporarily. You can either click directly in it to Mute a Track or use the Remote feature and Mute the Track via MIDI.

Lower/Upper

These parameters allow you to restrict the pitches played by a Track. If a note falls outside the set range (for example due to transposition) it is automatically transposed one or more octaves so that it falls inside the range.

About Mapping

As described above, for each Track you can turn on and off a parameter called Mapping, indicated by an M. When Mapping is on, an X is shown in the "M" column for that Track.

The X'es indicate that the Tracks have Mapping turned on.

TRACK	CHN	OUTPUT	INSTRUMENT	M	PRG	BANK
Drum	10	SB 128 MIDI	Standard Drum	X	124	Off
Bass maj	5	SB 128 MIDI	Slap Bs. 2	X	38	Off
Acc1 maj	6	SB 128 MIDI	Piano 1	X	1	Off
Acc2 maj	7	SB 128 MIDI	Brass 1	X	62	Off
Acc 3	8	SB 128 MIDI	Muted Gt.	X	29	Off

- When Mapping is off, you manually set a MIDI Channel, MIDI Output, Program Change etc, for a certain Track to make it play the sound you want.
- When Mapping is on, you select from a number of predefined instruments in your Style Tracks Setup. This Setup (which contains other things too, see [page 61](#) in this chapter) will become part of your Song when you save it. When you first launch Cubase VST, a General MIDI Setup is loaded.

In the Setup, the following settings are defined for each Instrument:

- MIDI Channel
- Output
- Program Change
- Bank Select.

When to use Mapping

- If you have a General MIDI compatible sound module, and you mainly use ready-made Styles, then Mapping should always be turned on, and all Tracks will automatically play back with the right sounds.
- If you mainly use ready-made Styles with non-General MIDI sound sources, you can still use Mapping. If you redefine the map, and then load new Styles, they will play back with the right sounds; the Piano Track will play with your piano sound etc. However, this is not fool-proof, since the Styles you load may pick from such a large number of sounds. You may have to modify the map as you go along and create new Setups for different projects.

You might also turn off Mapping and make all settings directly in the Edit Style list. Then, however, you will have to redo these settings for every Style and then Update the Styles to save the new settings to disk.

- If you create Styles for your own personal use only, you don't really have to use Mapping. Direct settings in the Style Edit list is probably quicker and more convenient.
- If you create Styles for other people to use, you should definitely turn on Mapping and make sure they play back well using the General MIDI map. See above for details.

Mapping and the MIDI Channel setting

Even if mapping is on, the MIDI Channel value for a Track can be changed in the Edit Style list. This is because there is no way for the program to anticipate how you want to set up the MIDI Channels in your instrument. The MIDI Channel set in the original Arrangement is a suggestion, but you may have to change this, especially if you don't have a General MIDI compatible instrument.

There are conditions when changing the MIDI Channel value for a Mapped Track may also affect the settings in the actual Instrument Map (the list of Instruments used when Mapping is on). See [page 49](#) for more info about this.

GM Map Mode

SOUND	CHN	OUTPUT	PRG	BANK	PLAY
Piano 1	any	SB 128 MIDI Sy1	Off	Off	X
Piano 2	any	SB 128 MIDI Sy2	Off	Off	X
Piano 3	any	SB 128 MIDI Sy3	Off	Off	X
Honky-tonk	any	SB 128 MIDI Sy4	Off	Off	X
E.Piano 1	any	SB 128 MIDI Sy5	Off	Off	X
E.Piano 2	any	SB 128 MIDI Sy6	Off	Off	X
Harpsichord	any	SB 128 MIDI Sy7	Off	Off	X
Clav.	any	SB 128 MIDI Sy8	Off	Off	X

By clicking on the "Map" icon, you switch to GM Map Mode, where you can change the definition of the current MIDI map. When a Track is then set to be "Mapped" (see [page 47](#) in this chapter) and you select an Instrument, the MIDI Output, the Program Change number, the Bank number and possibly the MIDI Channel (see below) will be picked from the settings in the map.

The Map that the Style Track defaults to is adapted to the General MIDI protocol, but by making up your own map, you can prepare your Styles for use with other sounds on other Program Change numbers and MIDI Outputs. If you do your homework, ready/made styles will then automatically play with the right sounds when you use them in your own Setup. For information on how to Save and Load Setups, see [page 44](#).

- The Instrument list in the Style Track differs from General MIDI in one respect: In Style Tracks, Instruments 124 to 128 are intended to be used for switching between Drum Kits.**

For more detail on the various MIDI messages described below, see above.

Sound

This is simply the name of the Sound. Double click and enter a new one if you wish. But, please note that one of the purposes of Mapping is to use the ready-made Styles with your own Setup. Changing the naming of the Instruments kind of defeats this purpose.

All Steinberg Styles are mapped to the General MIDI set of programs. While it might be a good idea to define a new Program Change number and perhaps MIDI Output for a certain Sound, renaming it might lead to confusion.

Channel

This is the MIDI Channel of the Instrument. This value has a special meaning, as described below:

- If this is set to "Any", the Track will use the MIDI Channel of the Track in the Arrangement that was used to build the Style. Therefore, "Any" is the recommended setting.
- If you set this to any of the values 1 to 16, the Track will play on this MIDI Channel when you set it to play this Instrument. However, please note that this may (accidentally) make several Tracks play back on the same MIDI Channel, which may not be what you want.

There is one very special thing to note about setting this value to anything but "Any". If you do, and the MIDI Channel is changed for a mapped Track in the Style Edit list, this will also change this value in the map, although the Map isn't visible. The thinking behind this is that if you make a change in Style Mode under these conditions, you will probably want the map reprogrammed at the same time (you might for example have "moved" your piano sound to another MIDI Channel in your MIDI rig).

Output

This is simply the physical MIDI Output for the Instrument.

Prg (Program)

This is the Program Change number that selects the sound you want.

Bank

This is the Bank Select number that selects the correct Bank in the Instrument.

Play

When this is activated (an "X" is displayed), any changes you make to the map will be followed by a MIDI Note being sent out with those specifications, allowing you to audition the selected program.

About Drum Maps

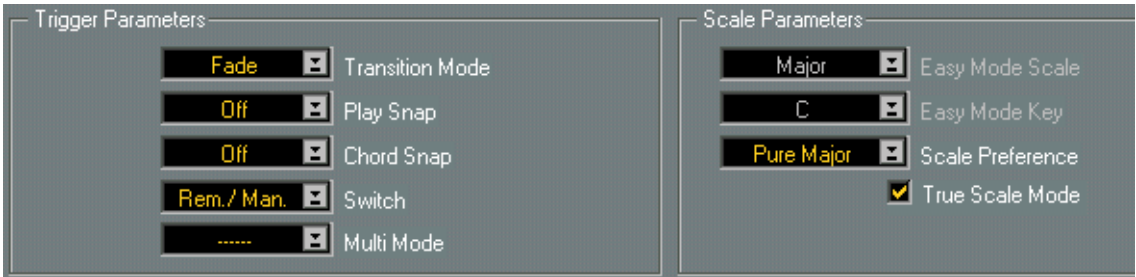
When a Track's Mode setting is set to "Mapped", it will play back via the current Drum Map. All ready-made Styles included with Style Tracks use a General MIDI drum map to decide which drum sounds go on which keys.

But if you have a non-GM compatible instrument or set of instruments, you can do one of two things: You can either modify the GM map or you can load one of the ready-made maps that come with Style Tracks.

No matter which method you choose, the result is that the drum sounds get re-mapped from General MIDI to whatever keys, MIDI Channels and Outputs that the new map defines. Just make sure to include the drum map you wish to use in your Style Tracks Song and save this Song. This will make the Styles play back with the correct drums sounds the next time you load the Song.

To find out more about drum maps, please refer to the Drum Edit and Drum Tracks chapter in the Getting into the Details document.

Settings Mode



This Editor Mode contains settings for how the Style Track should behave when changing Variations and Chords, and also settings for which scales should be used.

Transition Mode

The Transition Mode setting is used to decide how the actual switch between variations should happen. If Transition Mode is set to “Fade”, a change of variation will result in a smooth move from one variation into another, even if the change happens in the middle of the bar (which can happen only if Play Snap is set to Off, see below).

However, if Transition Mode is set to Start, the Style will always start over from the beginning when a new Variation is selected. While this is probably less useful when Play Snap is set to Off (the Style may start over anywhere in the middle of a bar!), it can be handy in the two other modes (Bar and Part).

Play Snap

The Play Snap setting (which is duplicated in the Inspector, but there is called "Snap") is used to decide when the Variation change should take place. The options are:

- "Off" (instantaneous changes).
- "Bar" (change happens at the beginning of the next bar).
- "Part" (makes the Variation change happen when the Style "loops", that is, it starts repeating itself. It's called Part, since Style patterns are originally made up of Parts in an Arrange window as described in the next chapter).

-
- ❑ **If the Variations in the Style are of different length, Transition Mode should be set to Start, and Play Snap should be set to Bar to avoid confusion.**
-

Chord Snap

This setting is used to set how the chord changes happen. The options are:

- "Off" (instantaneous changes).
- 1/4 (changes happen at the closest quarter note).
- Bar (the chord changes at the beginning of the next bar).

Switch

This parameter is a duplicate of the Switch pop-up menu in the Inspector.

Multi Mode

Some Styles are "Multi". This means they might contain several "variations within a variation" so to speak. These "nested variations" can get selected in two ways, either depending on which chord type you play (Major, Major 7 etc) or by velocity. You choose one of these methods with the Multi Mode pop-up menu.

- If this field displays "-----", then this Style is not a Multi Style.
- If this field displays "Chords", different phrases will get selected depending on the type of chord you play. Different phrases may appear for each of these chords: majors, 7ths, maj 7ths, minors, minor 7ths, and diminished chords.
- If this field displays "Velocity" different phrases will get selected depending on how hard you hit the keys.

The setting is global, that is it is valid for all Styles. If you plan to make your own Styles, using the Multi feature, read more about this in the next chapter.

Scale Preference and how the program selects scales

There are two mechanisms behind the way Style Tracks manages to adapt the phrases in the Style to your playing. First of all it analyses your playing to find out what chord to use (or it receives this information from the Chord Track). Then it modifies the notes in the phrase so that they fit this chord. Now, this last task is no simple one. Exactly how to modify the notes depends not only on which chord you played, but also which key you are in, and to some extent the style of music. To give the program some "advice" on how to modify the Style, a pop-up menu called Scale Preference is used.

The setting is global, that is, once set it is valid for all Styles. It consists of a pop-up menu with a number of predefined scales to choose from.

The pop-up menu is divided into two sections. Above the divider (the dotted line) are a number of "macros" (combinations of several scales) especially designed for Style Tracks. If you use one of these scales, when you play a chord, the computer selects one of the scales in the macro, using "intelligent" methods built into the program.



The Arabian scale "macro" selected.

Below the "macro" scales are regular scales that you also find in Logical Edit, the Transpose dialog etc. If you select one of these, the program always uses exactly that, but in a key that the program decides.

Here are descriptions of the first ten options on the menu:

Pure Major	Only selects between major scales in different keys.
Nearly All	Selects between many different scales.
Common:	This tries Major scales and Harmonic Minor and Melodic Minor when the Major doesn't fit.
Minors	Tries Harmonic minor, and when that doesn't fit, Hungarian 1 or 2.
Blues	Selects between Blues 1 and 2, and when that doesn't fit, Major.
Pure Pentatonic	Always maps notes to the Pentatonic scale, which might result in pretty dramatic changes to the style, since there aren't too many notes to choose from.
Pop	Selects between the Pentatonic, Major and Blues 2 scales.
Asiatic	Selects between Oriental, Japanese and Persian scales.
East-West	Selects between Chinese, Balinese and regular Major scales.
Chromatics	Selects between Whole Tone, Diminished and Major scales.

If you don't know what to choose, try Pure Major first. If that doesn't fit the bill, try Common, Nearly All and Pure Pentatonic, in that order.

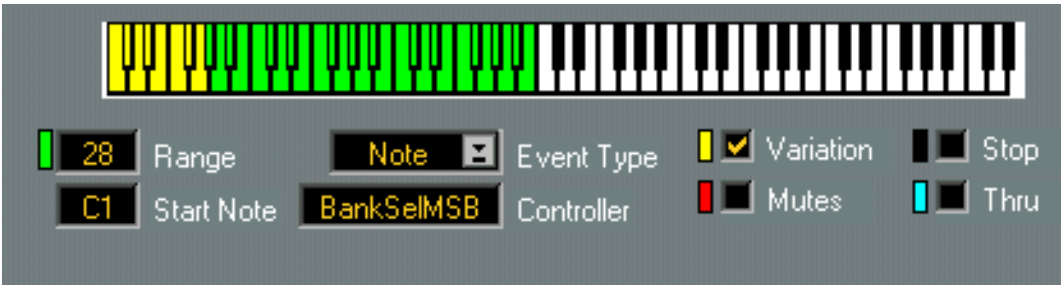
The Easy Mode Scale parameters

The Easy Mode Scale and Easy Mode Key parameters determine the result when you play the Style Track using the Easy mode. See [page 40](#).

True Scale Mode

If your Style contains long notes, they may continue to sound after you change chord. This is not always desired, since the "overhanging" notes may not be in the scale of the new chord, and therefore may sound dissonant. When True Scale Mode is On, Cubase VST will turn off notes that no longer fit the scale after a chord change, and output a new note with the correct pitch. This correction is done immediately, but will only affect notes that would sound for at least another quarter note.

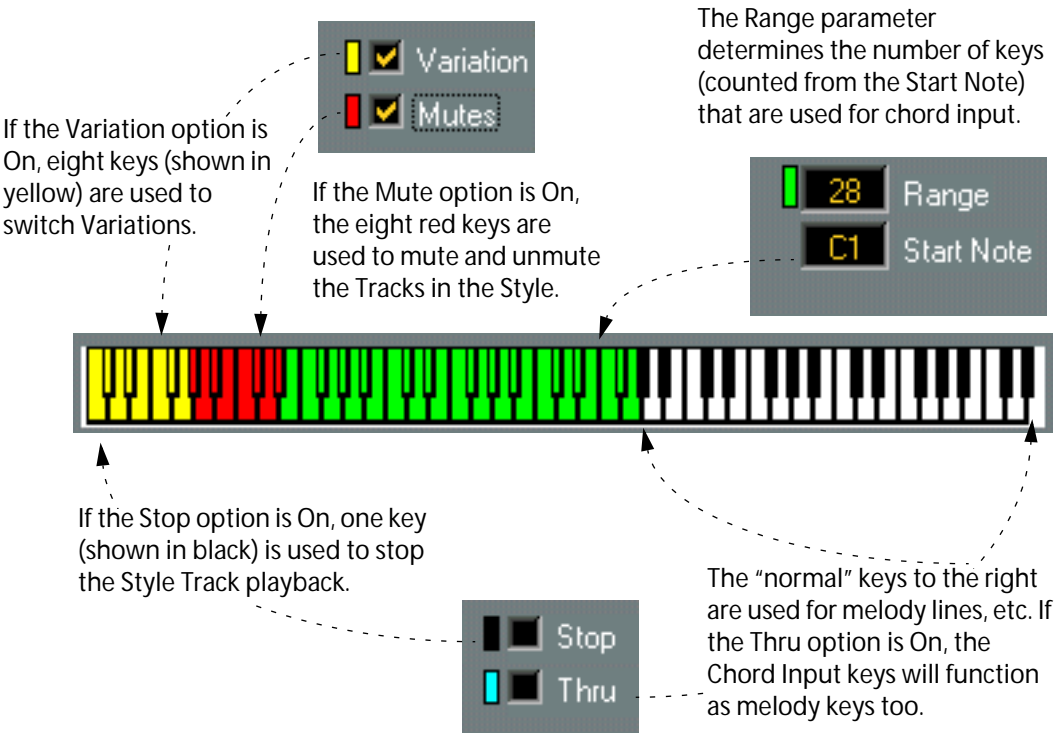
Remote Mode



The Remote Mode is used to set up remote control of the selection of Variations, but there are also other controls that can be used in a live performance.

The Keyboard display

If you turn all options on, you will note that the displayed keyboard has several distinct areas indicated graphically. These correspond to different “remote commands”, described below.



Startnote

You may shift the entire set of keyboard “control zones” up and down the keyboard by changing the Startnote value. You would typically set Start to the lowest key on your keyboard.

Range

This value determines how many keys on the controlling MIDI Instrument will be used to change chords. Exactly where on the keyboard these "chord keys" will be situated, depends on the Startnote value, and on the other controlling options (if these are activated or not). The resulting key range is shown on the keyboard display with a blue pattern.

Eventtype

This parameter allows you to switch between two different ways to remote control the Style Track. The options are:

- Note (MIDI Notes are used for remote control).
- Prg (MIDI Program Change messages are used).

How Program Change messages are used is described on [page 55](#).

Controller

If the Switch setting in the Inspector is set to Ext. Control, you can use MIDI Control Change messages to switch between variations:

- **Set Controller to the Control Change number you plan to use.**
Preferably select a Continuous Controller (like a modulation wheel or Data Entry slider) since a Controller switch (such as a sustain pedal) will only toggle between the first and last Variation.

Variation

This is a checkbox, determining if change of Variations should be remote controlled or not.

- **If Variation is checked, the key area used for Variations will be shown in a yellow pattern on the keyboard display.**
The keys correspond to one Variation each, with the first Variation on the leftmost key.

Mutes

When Mute is activated (checked), a range of eight keys indicated with red can be used to mute/unmute the Tracks in the Style (the Tracks can be seen in the list at the top of the window). Use this for creating variations when playing live or to create breaks (by for example muting the drums).

Stop

If you check this box, the "Stop" key is activated. When active, this is the lowest key of all the "remote keys", and its position on the keyboard is indicated in reverse video; that is, if it is on a white key it is black and vice versa.

- **If you press the Stop key on your MIDI controller, the Style Track will be stopped.**
This can be used to turn the Style Track off completely, to create a break or to end a song. When you select a variation again, the playback commences as before (you may select a new style while the program is in "off" mode).

Thru

“Above” (to the right of) all other key areas is a range of normal black/white keys. These will always transmit regular MIDI notes on MIDI Channel 1. You can use this to add a melody to the Style Tracks output, by setting up a sound that receives on this Output and MIDI Channel.

If you have the Thru setting in the remote section turned on, the Chord Input keys will also be Thru-put on the same MIDI Channel and Output. This can for example be used to layer a pad sound onto the chords from the Style.

Using Program Change for remote control

You can control the “Stop” function, plus Variation selection and Mute via Program Change, not only via your MIDI keyboard (as described above). For example you may have a master keyboard with buttons that transmit Program Change, or you might use a MIDI equipped foot control.

- **Click on the Eventtype value field to change it to “Prg”.**

This enables remote control by Program Change messages.

Now, the first Program Change numbers will control the Remote Functions as follows. Exactly which number is used for what follows the same logic as the keys on the keyboard, the lowest number (Program Change 1) is always used for the Stop function if it is activated, after this follows Variations and then Mutes, if they are in turn activated. The table below shows all the possibilities:

Functions activated in editor:	"Stop" activated by Prog Ch. #:	Variations selected by Prog Ch. #:	Muting activated by Prog Ch. #:
Off only	1	None	None
Variation only	None	1-8	None
Mute only	None	None	1-8
Off + Variation	1	2-9	None
Off + Mute	1	None	2-9
Mute + Variation	None	1-8	9-16
Off+Mute+Variation	1	2-9	10-17

Program Change messages can also be used to switch between Styles:

- If Status is set to “Note”, Program Change numbers 1 to 15 are used.
- If Status is set to “Program”, the first fifteen Program Change numbers “above” the ones already used (see table above) will be used.

Styles Mode

STYLES			VARIATIONS			
FUNKROC	POLKA	HONKYTN	INTRO 40 Bars	GROOVE 160 Bars	GROOVE 2 160 Bars	GROOVE 3 160 Bars
ROCKDRU	TRDCNTR		GROOVE 4 160 Bars	GROOVE 5 160 Bars	BREAK 40 Bars	FINALE 80 Bars

In this mode, the left side of the display is used to select and load Styles etc, just as with the buttons in the Inspector. To the right of this you will find all the Variations for the Style, which can also be selected by simply clicking on them.

Chord Tracks

If you want to pre-specify the chord changes for your song (as opposed to playing them in real time) you use Chord Tracks. Chord Tracks are special Tracks that only contain chord instructions and instructions to select variations. They do not contain any MIDI data. There are several ways to create a Chord Track:

Creating Chord Tracks

By direct recording

1. Set the program to Listening mode (by selecting the Style Track and using the Inspector).
2. Create a Track and turn it into a Chord Track, using the Track Class pop-up menu in the Track List.
3. Make sure the Chord Track is selected, and activate recording as usual.

M	C	T	Track	Chn
	♪		Pad	1
	c7		Track 2	2

The Chord Track Class symbol.

4. **Play the chords of the song.**
The Channel and Output settings for the Chord Track are used for Thruput only, so that you may hear the chords you are playing with a sound of your choice.
 5. **If you have set up your Remote Controls to select Variations, this will get recorded, too.**
Mutes and the Stop function are not recorded.
- **You may of course overdub on the Track.**
You might for example only enter the chords the first time, and select variations and Styles during a second pass.

6. When you are done, the Parts have been filled with chord instructions and variation selections, which are automatically quantized, so that they appear at sensible positions. The Compute Scale function (see below) is also automatically invoked when you finish recording.

Playing back

1. Select the Style Track and set it to Slave status.
 2. Make sure there is only one un-muted Chord Track.
 3. Put this Chord Track at the top of your Track list, or at least above the Style Track.
-
- ❑ This has to do with the timing priorities in Cubase VST, and if your chord changes are to happen at the correct positions in the song, the Chord Track must be above the Style Track it is "controlling".
-

Recording Style and Variation changes using the Inspector

1. Set the program to Listening and create a Chord Track, as described above.
2. Activate Multi Recording in Merge mode (see the Multi Recording chapter in the Getting into the Details document).
3. Click in the "R"-column of the Chord Track to enable recording.
At this point, only the Chord Track should have recording enabled.
4. Select the Style Track, so that its Inspector appears.
5. Start recording as usual.
6. Now you can play the chords of the song as before, but you can also select Variations and new Styles from the Inspector!
7. Play back as above.

Creating a Chord Track By converting a MIDI Track

1. Create or select a MIDI Track.
2. Record your chords into it, by playing them (as simply as possible).
3. Edit the Track, quantize it, for example to quarter notes (4) so that all the chord changes happen at the exact positions where they occur in the song.
4. Open the recording in the Score editor. Use the Make Chords function to create chord symbols for all the chords in your song.
If necessary, double click on the chord symbols to edit them.
5. Close the Score editor.
6. As a safety measure, make a copy of the Track and mute it (you might want to edit it later).
7. Select the original (un-muted) Track and convert it into a Chord Track by using the Track Class pop-up menu in the Track list.
The program will warn you that your MIDI data will be lost. Click OK.
8. Edit the recording by double clicking on the Part(s) so that the Score editor opens, and select Compute Scales from the pop-up Do menu.
Close the editor.
9. Make sure this is the only un-muted Chord Track and that it is above the Style Track in the Track List.
10. Set the Style Track to Slave Mode by using the Mode pop-up menu in the Inspector.
11. Activate Play.
The Style Track will now automatically follow the Chord Track, just as if you yourself had played those chords on the keyboard.

Loading Chord Parts

Using the Open item on the File menu, you can load Parts with chord changes from disk, onto a Chord Track, just like you load MIDI Parts onto MIDI Tracks.

Editing recorded Chord Tracks

You can use the Score editor to edit some aspects of the Chord Tracks.

- **When you double click on a Chord Part, the Score editor opens. You can use this to edit the meaning of the Chords (but don't move them).**
This is done by double clicking on the Chord and entering new information in the dialog box, as described in the Score Layout and Printing document of the Cubase VST documentation.

You can also edit the Scale Events inserted by the function Compute Scales. The two values represent the key and type of Scale as the list indicates. However, selecting another key or Scale type will probably make the program select a completely wrong voicing. We actually don't recommend you to edit the Scales at all.

The Compute Scale function

When you have converted a MIDI Track to a Chord Track, the program needs to figure out what scales to use for modification of the Style. And what scale to use depends on the chord progression of the song. Therefore, the program needs to "run through" the chords and find the appropriate scale for each.

As described above, you activate this function by selecting Compute Scale from the pop-up Do menu, in the Score editor. The result depends on the Scale Preference setting.

Actually the Compute Scale function is a version of the function used when you play in real time on the keyboard. However, calculating it in advance gets rid of some processing overhead for the computer. You must use this function on Tracks that you convert from MIDI Tracks to Chord Tracks.

Recording Style Track output into the Arrangement

If you wish to record the output of your Style Track into regular MIDI Tracks, proceed as follows:

1. Select the Style Track.
2. In the Inspector, set Record (at the bottom) to On.



3. Activate recording as usual in Cubase VST.
4. Perform your song as you would, by playing chords, switching between Styles and Variations etc, or by just playing back a Chord Track.
5. When you are done, stop Recording.
6. Before playing back, set the Style Track to "Off" in the Inspector (or you'll get double playback).

New Tracks are created as needed, with the same name as the Tracks in the Style. However, if Tracks already exist which have the correct channel and Output setting, these are used. This means that if you punch in later in the song, new Parts will be created on existing Tracks, just as you want it. You can punch in and out at will. You might for example start over from some position where you made a mistake in your real time input. If you punch in on existing recordings, use Replace mode. Punching in and out where you already recorded may create overlapping Parts.

The created Tracks are regular MIDI Tracks, and can be edited just like any Cubase VST Recording. Drum Tracks are not created, but you can change the Track Class setting to Drum yourself. This will map the notes to the correct Sounds, provided you have the correct Drum Map loaded of course. For more info about Drum Map handling, see [page 49](#).

The created Tracks have no "special" Inspector settings (if new Tracks are created, they will have the default Inspector settings; existing Tracks will keep their settings). Please note however, that if the Style itself contained for example Program Change messages or Volume Events, these will be also be part of the Tracks that get recorded.

Please note that if several Tracks in the Style play to the same MIDI Channel and Output, overlapping parts may be created when recording into an Arrangement. This might for example happen with the drum library Styles (see [page 62](#) for details).

File handling and file functions

What is in a Style file?

Well actually, there are no special Style files. Styles are just normal Arrangement files, but when you load them, some things, like the MasterTrack, the Notepad and the parameters related to the Window, are simply ignored. So, a Style consists of the following:

- The actual Arrangement that is the basis for the Style, the Tracks and Parts, including the names of the Tracks.
- The Tempo of the Arrangement (as set on the Transport Bar). However, this is only used during playback if the Master button is turned "off" in the Arrangement where you play back the Style.
- The Inspector settings for each Track, which you can see displayed in the Track list in the Style Track window.
- Additional settings that are stored "invisibly" into the Arrangement file.

How are the other settings stored?

To play a Style you also need to make a number of settings, in the Inspector, and in the Style Track editor. These settings can be saved as a special StyleTrack Setup File (extension .XET). A Style Track Setup (not to be confused with a normal Setup file) holds the settings in the Inspector and in the Style Track windows, except the selection of Style and Variation.

Saving Songs

The foolproof way of saving a set of Styles and their settings is to make sure they are all in the computer as you want them, and then save it all as a Song. A Song contains the Styles and all the settings you have made.

- **If you make your settings and save them as the Def.All Song, they will be loaded on startup.**

Alternative ways of using Style Tracks

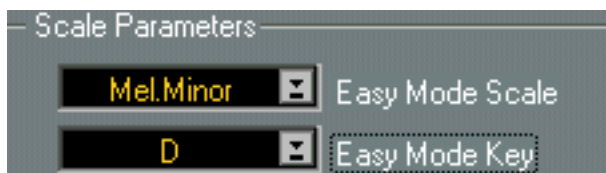
Below follow a few short hints on alternative techniques you could explore when you have come to grips with Style Tracks basic functions.

- **In a live performance situation, you may use Style Tracks to trigger Parts just as some musicians/DJs trigger samples.**
In this case you might stick to setting the Tracks to Normal (no transposition at all) and Transpose 1 (transposition without scale correction) and the Parts will behave very much like samples. Your variations might not be restricted to backing tracks, you might record for example an entire intro or break that can be triggered from a note on the keyboard.
- **Style Tracks can be used to create a library of for example drum beats and fills (an example of such a style is included on the CD-ROM) or bass lines.**
When you want to try out an idea, you call up your drum library Style from disk and skip through the different beats and parts until you find one that suits your idea. This can then easily be triggered automatically from a Chord Track.
- **You can also use Style Tracks for live triggering of entire songs.**
You might for example do a mixdown of your backing tracks, set the channel to Any and add solos etc on separate Tracks. In the Style Track editor, set all Tracks to Mode Normal. In this way you can use the Mute function to bring in and take out parts (like the solo) on top of the backing Track.
- **To create semi-random drum parts, create a drum Arrangement with hi-hat on one Track, bass drum on another and so on. Make up a number of variations, each a little bit different from the other.**
When you then play back this Arrangement as a Style, use Random Mix, and Style Tracks will pick different drums from different Variations.
- **Why not use Styles to trigger samples and sampled loops together with your MIDI parts? The key muting function allows you to quickly try out different combinations of loops.**
Also, if your variations are set up the right way, Random Mix will create combinations of loops and for example bass riffs, that you might never have tried yourself.
- **If you have a Style Track active, and you set up the Input Transformer to map the incoming notes to a scale, the incoming notes will be mapped to the scale currently selected "by Style Tracks".**
The effect is that your playing (passing thru the computer or recorded onto a Track) will be restricted to the current tonality, in other words, you can't play any wrong notes!
- **And last, a short tip on chord recognition. If you have selected a scale macro like Nearly All, which makes the program switch between almost any scale, minor and major, it might possibly happen that after a chord change, the program seems to be "stuck" in a scale that doesn't fit.**
To then reset the program to a specific scale, briefly play a chord with as many tensions as possible in the desired key.
For example, to reset to C major, you might press all white keys within an octave.

Chord Mode Details

Easy Mode

In this mode, you can use one finger to play all the chords you need. It works like this: You open the Style Track editor and locate the two Easy Mode Scale settings. Here you tell the program which key you plan to play in (Easy Mode Key) and the tonality of the song (Easy Mode Scale).



Simply put, if the song is in major, select Major, if it is in minor, select Harmonic Minor.

If you for example select C and Major as your key and tonality, pressing C will give you a C Major chord, pressing D will give you a D Minor, E will give you an E minor, F an F major, etc. Notes outside the scale are not recognized, and therefore do not modify the Style at all.

But you can also add tensions to the chords.

- If you press a key one semitone above the root note you get a "6" chord. Pressing "C" and C# gives you C6 or Cm6, depending on the key you are in (if the chord is a major or minor).
- If you add the key two semitones above the root you get a major 7th. For example, pressing "E" and "F#" gives you an Emaj7 or a Em7, depending on which key you are in.
- If you press the key three semitones above the root note, you are forcing the program to play a minor.
- You can add these keys together. For example, pressing "C", "C#", "D" and "Eb", gives you a Cm7/6, even if the tonality suggests a major chord for that key.

Roland Mode

- A single finger gives you a major chord.
- Adding the key immediately to the left turns the chord into a major 7th (for example a Cmaj7).
- Adding the note two semitones below gives you a "common" (dominant) 7th chord (for example a C7).
- Adding a minor triad turns the chord into a minor.
- To the minor chord you can add a (minor) 7th by adding a key two semitones below the root note.
- A "sus4" chord is created by playing it as it is, that is root note, fourth and fifth.
- A diminished chord is created by playing the root note and a diminished fifth, for example C and Gb.
- An augmented chord is created by playing it as it is, i.e. the root note plus a major triad and an augmented fifth (for example C and G#).

Yamaha Mode

This mode follows the fingering style used on Yamaha, JVC and Technics keyboards.

- A single finger gives you a major chord.
- Adding the next white key to the left gives you a major 7th chord (for example a C7).
- Adding the next black key to the left turns the chord into a minor.
- Adding the next white key to the left and the next black key after that turns the chord into a minor 7th (for example Cm7).
- "maj7" chords can be created by playing them "as is", for example, to get a Cmaj7, play C, E, G and B.

Casio Mode

This mode follows the fingering style used on Casio and Hohner keyboards.

- A single finger gives you a major chord.
- Adding the next "two" white keys to the left gives you a major 7th chord (for example a C7).
- Adding the next key to the left turns the chord into a minor.
- Adding the next white key to the left and the next black key after that turns the chord into minor 7th (for example Cm7).
- "maj7" chords can be created by playing them "as is", for example, to get a Cmaj7, play C, E, G and B.

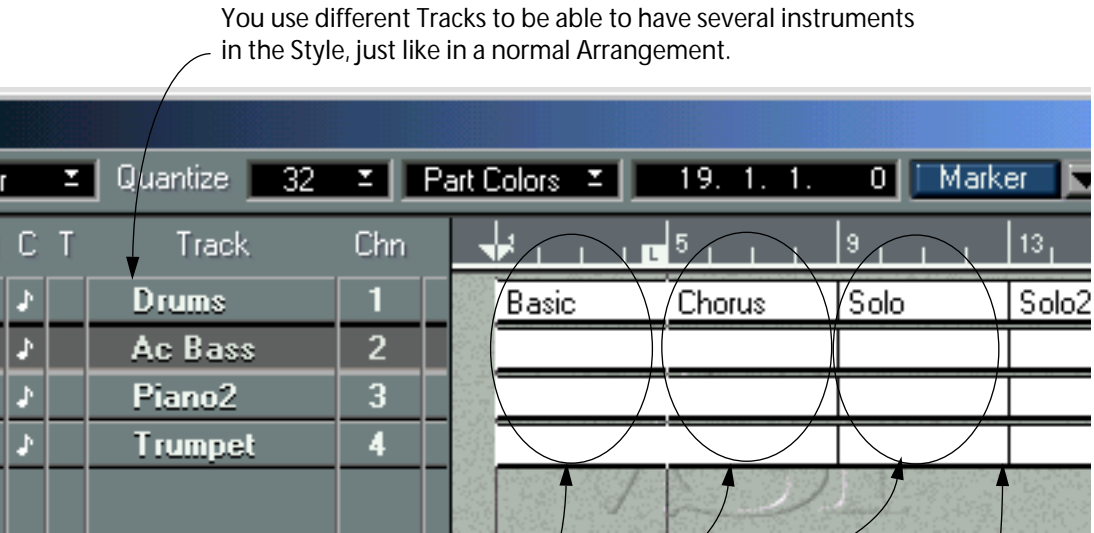
Style Tracks – Creating Styles

Introduction

Creating Styles is actually quite easy. If you already know how to record into an Arrangement, you basically also know how to create a Style. The only things you need to know is how to organise your recordings and which settings you have to make for the Style to play back properly.

How a Style is Built

This picture shows how a Style may look when creating it or opening it as an Arrangement:



Each Variation of the Style consists of Parts, one for each Track. The Variations are lined up after each other.

The Variations may have different lengths, but all the Parts (on the different Tracks) that make up one Variation, must have the same length and be aligned vertically. No space is allowed between the Variations.

Recording the Style

Preparations

- 1. In your current Arrangement, create a Style Track.

M	C	T	Track	Chn
	♪		Pad	6
	🥁		Styletrack	

- 2. Create a new Arrangement.

Setting Up the New Arrangement

Creating Tracks

- 1. Create as many Tracks as your Style needs.
You might for example create one Track for drums, one for a bassline, etc. (MIDI and Drum Tracks can be used.)

☐ You can only have up to eight Tracks in a Style!

- 2. Name the Tracks.
By naming the Tracks, you also name the Tracks of the Style. Make it a habit to always name the Tracks after the instrument they play.

Making Inspector Settings

The Inspector settings you do for the Tracks will be the settings the Style will use, the settings that are displayed in the Style Tracks Edit window:

- 1. Set each Track to the desired MIDI Output.
- 2. Set each Track to the desired MIDI Channel.
If you are creating Styles for others to use, we recommend that you put the drums on MIDI Channel 10. Otherwise you can use any Channel you wish.

☐ Avoid setting a Track to MIDI Channel "Any".

- 3. Set a Program Change value and Volume for each Track.
If you are creating Styles for others to use, we recommend you to stick with General MIDI Program numbers. This will make it easy for GM users to use the Styles right away. Other users can always map the sounds as they like.

☐ Avoid other Inspector settings, like Transpose and Delay. If you wish to for example Transpose or Delay a Part, use the editing functions to permanently change the recording instead.

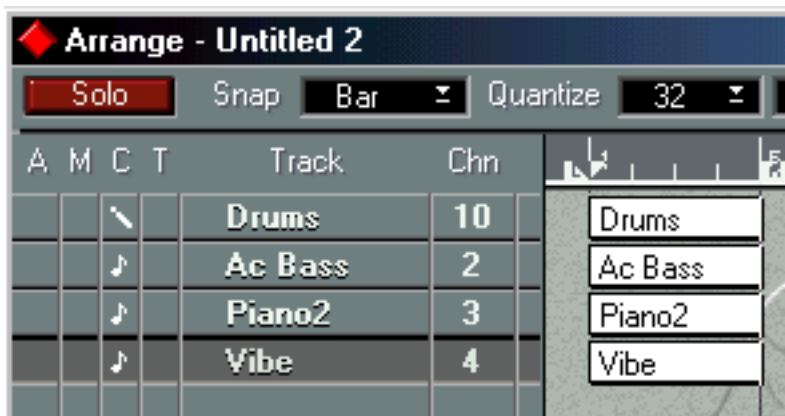
Setting Up for Drums

For rhythms and drum patterns in the Style, we recommend you to always use Drum Tracks and the General MIDI Drum Map that comes with the program. In fact, if you only create Styles for your own use, you might skip this rule. But on the other hand, if you plan to mix and match Styles that you have created and that somebody else did, it might be just as well following it. Steinberg Styles always use the General MIDI Drum Map.

Creating Parts for the first Variation

1. Create empty Parts on each Track, for the first Variation. These Parts must be of equal length.

You might for example create one two bar Part on each Track.



Parts used in Styles should never exceed 64 bars in length.

2. Record into the Parts, following the “guidelines” below:

- Play in C.**
If you don't, the Style will play back in the wrong key when you use it.
- Do not play any chord changes!**
Remember that you are creating a model for an arrangement, not the entire arrangement.
- Add all tensions to the chords that could possibly fit the arrangement.**
Style Tracks can never add any notes by itself, so if you never add that “9th”, it will never be played, even if you (or whoever is using the Style) input a “9” chord.
However, even if you add a tension, it will be left out or transposed when it doesn't fit the current scale and the Parameter settings. Therefore, it is better to add tensions than to leave them out.
- If possible, Quantize your Styles.**
This ensures that switching between Variations in for example the middle of a bar will be smooth and will not lead to any “cut off”, “flam” or double notes.
- If you anticipate that Random switching between Styles will be used, or if switching between Variations in the middle of a bar will be frequent, don't make the Variations too different.**
In fact, you will probably find that less difference between Variations will also make general musical sense.

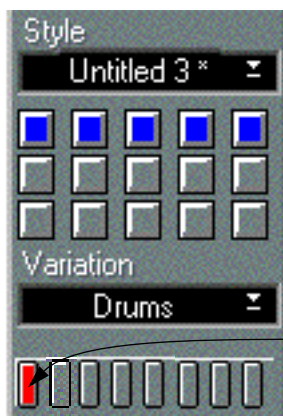
- You may insert Program Change commands and Volume Events into the Parts (as Events), but if your Style will be used by anyone else, please note that you do not know when the “user” will switch from one Variation to another, which means he/she might then enter into a new Variation with the wrong Program or Volume.

Checking and Editing

1. Play back the Arrangement (perhaps in Cycle Mode) and check that you like what you hear.
 2. If needed, edit the recordings in any MIDI editor.
 3. If needed, edit the Inspector settings.
-
- ❑ Make sure you change the Inspector settings for the whole Track, not for each Part! Also, avoid settings like Transpose and Delay (Transposition and Delaying should be done by permanently changing the recording in an editor).
-

Trying Out The First Variation

- 1. Switch back to the original Arrange window. Select the Style Track.
- 2. In the Style pop-up, select the top item, which has the name of the Arrange window you just recorded in, followed by a star (Probably something like "Untitled 1*").



Your new Style currently only has one Variation.

- 3. Set the Style Track to Listening mode (or Easy mode or one of the other "one-finger" modes, if you prefer).
- 4. Open the Style Track editor.
- 5. Click on the Tracklist Mode icon to make sure the editor is in Style Mode.



The Tracklist Mode icon.

- 6. Take a look at the Tracks in the Style Track Edit list.
You will see that they are named like, and have the same settings as in the Arrange window where you recorded them.

TRACK	CHN	OUTPUT	INSTRUMENT	M	PRG	BANK	TRAN	VEL	VOL	MODE	MUTE
Drums	10	SB 128 MIDI			Off	Off	0	0	Off	Slaved	
Ac Bass	2	SB 128 MIDI			Off	Off	0	0	Off	Slaved	
Piano2	3	SB 128 MIDI			Off	Off	0	0	Off	Slaved	
Vibe	4	SB 128 MIDI			Off	Off	0	0	Off	Slaved	

- 7. If you want others to be able to use your Style, you probably should click in the "M" column to activate Mapping for the Tracks.
This is described on [page 47](#).

❑ Either activate Mapping for all Tracks or none. Otherwise the MIDI Channel settings may cause confusion and "wrong sounds".

8. Set each Track to the right Mode.

The Mode governs how the Track will be played back. When you create a “new” Style, all Tracks will be set to Slaved, except the first Track, which will be set to Mapped if it is a Drum Track and Normal if it is a MIDI Track. This is because the program assumes that the first Track holds the drums and the rest Parts with regular tonality.

• These are the available Modes:

Normal	The output is not modified at all. No transposition, no mapping to notes, no nothing. The Track just plays back as it was recorded. Use this for drum and percussion Parts which are not playing back via the drum map (see below).
Mapped	The output of the Track is played back via the current Drum Map, just as with regular Drum Tracks. It is not transposed or modified in any other way. This is the type we recommend for your drum and percussion Parts.
Slaved	This is the most common Mode for regular Tracks like bass, piano etc. It will transpose them to the chord and modify their output to the tonality (the scale).
Modal	In this mode, the output from the Track is modified to the tonality, but not transposed! Use this for lines like arpeggios which are to be relatively “fixed” in pitch.
Transpose1	The output is transposed to the Key of the last recognized Chord, but the notes are not mapped to the tonality or modified in any other way.
Transpose2	The output is transposed to the Key of the last recognized Chord and mapped to the tonality of the scale. The difference between this mode and Slaved is that the Track does not look at the contents of the chords that are coming in, instead it simply gets transposed and then “constrained” to the notes in the current scale. If you have for example a bass line on a Track, this might play back closer to the original in Transpose2 mode than in Slaved, since more notes are normally “allowed”.

9. Close the editor window.

10. Try out your new Style just as you did with the included, predefined Styles.

See the previous chapter.

Creating More Variations

The Style we have created so far only contains one Variation. Let's add some more.

1. Switch back to the Arrange window where you created your Style.

- 2. Create a new set of Parts after the existing (on the same Tracks).**

These will become the second Variation. Instead of creating new Parts, you might also duplicate existing Parts and modify them.

- ❑ The Parts that are “above each other”, on different Tracks must all be identical in length. There should be no overlapping Parts, and no gaps. Even if a Track doesn't play in one of the Variations, you should always create an empty Part for it.

3. Record into the new Parts, following the guidelines on [page 68](#).

- ❑ **Again, remember - If you change the Inspector settings, make sure you do it for the whole Track, not for each Part!**

M	C	T	Track	Chn
	\		Drums	10
	♪		Ac Bass	2
	♪		Piano2	3
	♪		Vibe	4

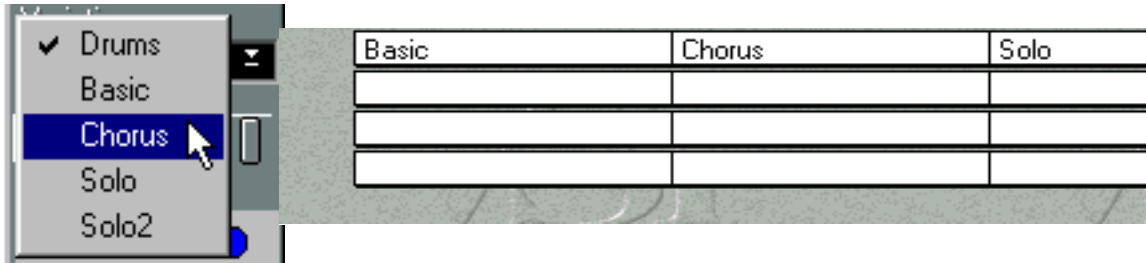
This Arrangement is properly organised. No gaps between Parts, no overlapping, Parts on different Tracks have identical lengths.

- 4. If you like to add more Variations, create new sets of Parts.**

The limit is 64 Variations per Style (which means 64 Parts per Track).

- 5. To name the Variations, name each Part on the first Track.**

These names will appear on the Variation pop-up in the Inspector.



Saving the Style

- **To Save the Style in the Song where you use it, simply Save the Song.**
All the Styles in the Song are automatically included in the Song file.
- **To save the Style only, save the Arrangement where you created it.**
Styles are actually only regular Arrangement files used in a special way, so saving the Arrangement is the same as saving the Style.

When you load an Arrangement for use as a Style, the Notepad, Master Track and all the “windows parameters” are simply ignored, since they make no sense for the Style. The only additions to the Arrangement that are made when using it as a Style are the transposition Mode, the Map on/off feature and the muting of Tracks.

Multi Styles

What Are Multi Styles?

This is the most advanced feature of all in the Style creation set of tools. It will most probably only be used by those of you who plan to make Styles available to other people.

Multi Mode is a way to put variations inside Variations, so that different bass lines, melodies, etc. can be played back. The player controls which of these are used by playing different chords or by using different velocity.

Creating the Multi Style Parts

To create a Multi Style Part, you must insert for example several melodies into it, but each with Events on a separate original MIDI Channel. This can be achieved for example by doing a Mixdown of several Tracks (each on a different MIDI Channel) to one Track.

You might for example set up a number of Tracks with different versions for different purposes (see below). When you are done recording into them, you might set them each to a different MIDI Channel and use the Mixdown feature to combine them into one Track. This Track should then be set to some specific MIDI Channel, it doesn't matter which (but don't set the Track to "Any"!).

- **To avoid confusion, it might be a good idea to create the "dummy" Tracks in a separate Arrange window and perform the Mixdown there.**
This composite Part can then be copied over to the Arrange window with the other Tracks created for the Style.

How Style Tracks "Find" the Multi Styles

If the Style Track encounters a Track which contains Events on several MIDI Channels, but which is not set to Any, it considers this Track a Multi Style Track. Multi Style Tracks are indicated by a ">" symbol in the Track List in the Style Track editor.

TRACK	CHN	OUTPUT	INSTRUMENT	M	PRG	BA
Drums	10	SB 128 MIDI	Standard Drum	X	124	01
>Bass	6	SB 128 MIDI	Fingered Bs.	X	34	01
Piano	6	SB 128 MIDI	Piano 1	X	1	01

In this example, the "BASS" Track is of the Multi variant.

- ❑ **Multi Styles Arrangements will not be recognized as such unless you save them to disk and load them into the Style slots. You cannot work on them from open Arrangements.**

Selecting Modes For Multi Style Tracks

Tracks containing Multi Styles should probably use either of the modes Transpose 1 or Transpose 2.

Setting Up Switching

In the Style Track editor you will find a setting called Multi, in the Trigger Parameter section. If the Style contains Multi Tracks, this setting can be switched between “Chords” and “Velocity”.



Chord Mode

In Chord mode, different Chords are used to select one of the MIDI Channels in the Track, using the following scheme:

- If there are Events on MIDI Channel 1 and 2 only, the Events on Channel 1 will be played back with major chords, and the Events on MIDI Channel 2 will be played back with minor chords.
- If there are Events on MIDI Channel 1 to 6 they will get selected as follows:

MIDI Channel	Chord
1	Major with minor 7 (for example for example C7)
2	Major with major 7 (for example Cmaj7)
3	Major (for example C)
4	Minor with minor 7 (for example Cm7)
5	Diminished (for example Cdim)
6	Minor (for example Cm)

- ❑ **The Events must be on consecutive MIDI Channels with “no gaps” in the MIDI Channel numbering. In other words, if you want to use MIDI Channel 6 to get a special voice for minor chords with minor 7s, you must also have Events on MIDI Channels 1, 2, 3, 4 and 5.**

Velocity Mode

If Multi Mode is set to Velocity, different MIDI Channels are selected via input velocity, where the lower velocity values select lower MIDI Channels.

Studio Module – Introduction

What is the Studio Module?

The Studio Module is a tool for gathering and maintaining settings in your MIDI Devices. It performs this task by retrieving and sending out System Exclusive data, which is a very loosely defined type of MIDI data that each manufacture can utilise for their own purposes.

The Studio Module "knows" how to access all these different MIDI Devices via so called "drivers". A driver (also called a "device driver" in this manual) is a file that contains information about a certain device. With the Studio Module comes device drivers for more than 150 devices.

There is a special Windows program called DMaker which is used for creating your own Device Drivers. This is free to all Studio Module users and can be downloaded from the Steinberg ftp site <ftp://ftp.steinberg.net> (see the end of this manual). All the ready-made Drivers that come with the Studio Module were created with this program.

-
- ❑ **Although many great drivers are created by users, we can in no way guarantee their functionality. Please look at the "Info" about the driver in the Setup window to get information about who created it! (See [page 84](#).)**
-

The Studio Module also extracts "names" out of your MIDI devices (if there are any). As you know, synthesizers and other MIDI devices can be programmed to remember sounds and other settings, with individual names.

One of the unique things about the Studio Module is its total integration into Cubase. It extracts information (such as names and MIDI Channel settings) from the devices and makes this information available in the Arrange window automatically, which makes setting up for a Song much, much simpler.

The Drivers also contain a number of Macro Editors, each adapted to a certain device. These allow you to make swift and powerful changes to the settings in your devices. However, not all devices can have a Macro Editor built for them, due to the nature of their MIDI implementation.

The terminology involved with MIDI System Exclusive handling can be a bit bewildering. We have tried to create as consistent a naming scheme as possible in the Studio Module. We have also included a Glossary at the end of this manual where we describe what terminology we use. We also try to hint at what terminology different manufacturers use in their devices.

We don't mean to discourage you, but getting System Exclusive communication working smoothly may take some initial setup work. There are many pitfalls, due to the lack of standardisation between devices. We have provided as detailed information as we possibly can about how to make your setup work, and there is a Troubleshooting section on [page 158](#). We encourage you to follow the instructions in the Installation and Setup chapters down to the last detail.

This said, once you have your system up and running, the Studio Module will provide an unprecedented level of automation for your MIDI system, removing a lot of the "front panel fiddling" you had to do before this tool was developed.

Studio Module – Preparations

Setting up your MIDI System

You probably have your MIDI System set up already. But you might have to make adjustments to it to make full use of the Studio Module. Please read through the following check list:

- For each device from which you plan to get and send settings, you must have two way communication. In other words, the MIDI Out of the computer must be connected to the MIDI In of the device and the MIDI Out of the device must be connected to the MIDI In of the computer. You can very well have this connection happening via a MIDI Patchbay, and if you have an interface with multiple inputs, you can put some devices on one input and some on another.
- For devices which either can't send out their settings via MIDI, or for which you don't need to do this, you can forget about the return connection (MIDI Out on the device to MIDI In on the computer), these units can make use of the Studio Module anyway.
- Try to avoid chaining too many devices via their respective MIDI Thrus. This might lead to lost or corrupted data. Use a MIDI Thru box instead, if needed. Try to create as "clear" a signal path as possible between each device and the computer.
- If you have a programmable MIDI Patchbay to which you can send Program Change to select between MIDI Routings, first program this with one Patch that you use for your normal MIDI recording. Then make up additional patches, one for each device in your rig, which give bidirectional communication between the computer and the device. Make sure that only one device at a time is connected to the computer. Make note of the numbers of these patches, and also make sure you know which MIDI Channel to send Program Change messages to the MIDI Patchbay on. If necessary, set up the Patchbay so that it reacts to Program Change messages.
- If you have a programmable MIDI Patchbay that does not react to Program Change messages, still make up the settings as above, but simply make a list on paper of how to switch in each device.
- Make sure that all devices that are on the same Output have unique Global MIDI Channel numbers. A Global MIDI Channel is an overall MIDI Channel setting used for different things. If your synth can store for example several multitimbral setups (for example called Combis, Performances or Multis) you can probably switch between these by sending Program Change messages on this MIDI channel. If the device can be switched between a multitimbral ("many sounds") mode and a monotimbral ("one sound") mode, this channel might also be used to play one sound in the monotimbral mode. And finally, requests for System Exclusive data might rely on this MIDI Channel number. See the Setup chapter for more detail).
- If the device has two MIDI Channel settings, one for receiving and one for transmitting, make sure they are set to the same number.
- Make sure no instrument is set to Omni On mode (sometimes called just Omni mode, or "All" mode). This is a mode where it receives data on all MIDI Channels, and this is probably not too useful in a sequencer setup anyway.
- Make sure all devices that you plan to access via the Studio Module react to Program Change numbers. Often there are many Program Change On/Off switches, one global and several local ones in each multitimbral setup.

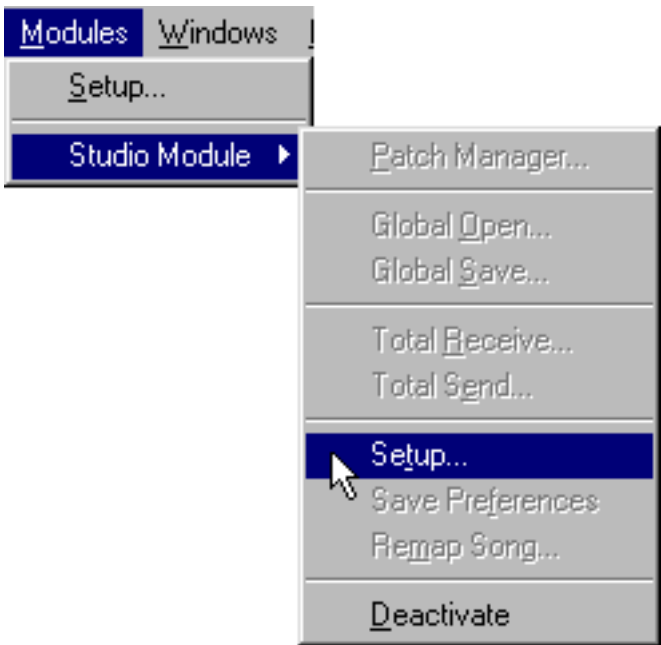
- If your device uses a so called Program Change map, either disable this or reset it to its default value. The Studio Module can not take Program Change maps in consideration when selecting Patches! The only exception to this rule is if something else is stated in the driver Info box (see [page 84](#)).
- Make sure the devices for which you plan to exchange settings are set to Receive and Send System Exclusive data. In some devices this is a function which has to be activated each time you turn on the instrument!
- If a Device has a MIDI Thru, MIDI Echo or MIDI Merge function (we do not mean a MIDI Thru connector) which makes it send out a copy of everything it receives via its MIDI In to its MIDI Out, make absolutely sure this function is turned off!
- Some devices have a switch on the back panel for switching one of the MIDI jacks between MIDI Out and MIDI Thru. Make sure this is set to MIDI Out.

OK, all set? Please proceed to the next chapter, "The Setup Window".

Studio Module – The Setup Window

Opening the Setup Window

The Setup window is opened by selecting "Studio Module" in the Modules menu and then "Setup..." in the menu that appears.



The window that appears is where you define your Studio, MIDI-wise, so that the Studio Module knows what devices you have, how they are set up and where they can be found in the MIDI "network".

Below, all the parameters are described. After this follows an example describing how to add and set up a typical device.

Overview



On the left side of the window, you have a list of the Devices in your MIDI rig (it might be empty now). You can have up to 119 such devices in the list. Each Device represents a physical MIDI unit. On the Studio Module disk you have a directory called STUDIO.DRV which contains other directories with ready-made so called "drivers", descriptions of how a certain unit communicates via MIDI, how it organises its memory etc.

Most drivers are made particularly for a certain make and model. But there are also a few special drivers (called List Drivers) and a "generic" MIDI Driver, which can be set up to work with almost any MIDI unit. These are described below and on [page 152](#).

Adding a Device to the List

If you click the button called Add, a standard file selector appears where you can locate the file you need.

If you happen to own two synths of the same model, you need to add the same device driver several times. A number then gets appended to the name (Korg M1 1, Korg M1 2 etc.). You can later rename each device, see below.

- ❑ **A warning for when you later change your Setup in the middle of a session:** If you add a Device, all Data Dumps for all devices (see [page 167](#)) that you have in computer memory, will be erased. If you wish to keep them, save to disk before you open the Setup window and add device drivers!

Removing a Device

You can delete a Device from the list by first selecting it (click on it) and then clicking the Remove button.

If you have added the same device driver to the list several times, the top one will always be removed.

Updating a Driver

If you for some reason get a new driver for one of your MIDI devices, you must replace the old version of the driver with the same name, residing in the STUDIO.DAT folder.

Getting Info

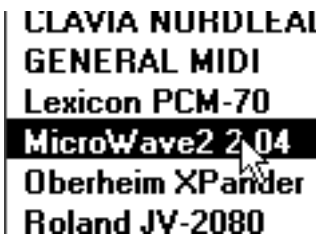
If you select a driver an then click the Info button, an information dialog box appears. By clicking the three buttons at the bottom of the dialog, you can select between different information:

Button	Information
Driver	The driver version and perhaps some special info about the driver (this will be empty for some devices).
Memory	The original file name and the (possibly modified) file name in the STUDIO.DAT directory, how much memory the driver occupies and how much memory any dumps created with this driver currently occupy.
Studio	Which version of the Studio Module you are using.

- ☐ When you add a new driver to the list, make absolutely sure you check its "Info" for important information.

The Settings

To change the settings for a device, first click on it in the list so that it gets selected.



Now the window will show settings for the selected device, arranged in three sections. The first is for the instrument (Device Settings), the second is for MIDI Patchbays in your "MIDI network" (Patchbay Settings) and the third is for so called Total Recall operations. There is also a pop-up Options menu.

Device Settings

Name

MicroWave2 2.04

Short name

Mcrowav2

File extension

mw2

Output

SB 128 MIDI 0

Input

SB AudioPCI 1

Sysex ID

0

MIDI Channel

1

1

Child MIDI channel

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

8

Device Name

The top item is the name of the Driver. You can change this if you like, and the list to the left will be resorted so that the items are again in alphabetical order. This name will be used when the Device is referred to in pop-ups etc, in various places in the program. You may use naming to differ between two units that use the same driver, for example two devices which use the same Generic or List driver. See [page 152](#) for more information.

Short Name

This field lets you enter a short name (8 characters) for the Device you are using. This is the name that will be used for this particular device (not the device type), in places where the full name can't be used, for example in the Arrange Window in Cubase.

All drivers created for a specific device already have a default short name, which will be OK in most situations. However, if you for example have two of a certain device, you can give them different short names to distinguish between them. You will probably want to rename Generic drivers and List drivers, depending on the device you use them with.

File Extension

When you save a Data Dump file, it will get an "extension", depending on the device. If you want to change the extension, use this field. You might want to do this to distinguish between two similar devices, for example an E-Mu Proteus 1 and Proteus 2 ("PR1" and "PR2").

Output

This is the physical Output on the computer that the Device is connected to (regardless if the connection is made via a MIDI Patchbay or not). As always in Cubase, the Outputs on the menu vary depending on what MIDI interfaces you have installed. This setting is also used in the Arrange window, see [page 135](#).

Input

This is the physical Input on the computer the Device is connected to (regardless if the connection is made via a MIDI Patchbay or not).

Sysex ID

This is the Device ID (also called SysEx ID) setting of the Device. If it has no such setting (if it uses MIDI Channels instead, see below) this field will show "– – –".

-
- ❑ **SysEx IDs are used so that you can address two devices of the same make and model individually via MIDI. But even if you only have one of a certain instrument, you have to make sure that this setting and the one in your instrument are identical, or things won't work.**
-

For information about how to set the Device ID of your particular Instrument, please refer to the operation manual that came with it. We can here only give you some general guidelines: the Device ID setting is often called "ID", "System Exclusive ID" or something similar. If in doubt when checking in the manual, please remember that you are looking for a setting for "System Exclusive" communication.

This setting may range from 1 to 16, from 17 to 32, from 1 to 128 or some other interval. It depends on the receiving device.

MIDI Channels

There are two MIDI Channel settings, the reason being that some instruments have two modes, a "single" mode and a "multitimbral" mode. The first MIDI Channel is for the single mode and the second for the multitimbral mode. If your instrument only has one "global" MIDI channel setting (which is the typical situation), you should set both fields to the same value.

These two settings are used for three things:

- **If a System Exclusive ID is not used for distinguishing one device from another, then MIDI Channels are used. In your device you will find something called a "Global MIDI Channel" or similar, an overall MIDI Channel setting for the entire device.**
- **If the instrument has a "Single" mode, where it receives on one MIDI Channel only, the Global MIDI Channel will be used to select Patches via MIDI.**
- **Often this same MIDI Channel is used to select not only between individual sounds, but from combinations of sounds (called Parent Patches in the Studio Module). If your instrument is multitimbral (if it can play several sounds at the same time) you can probably store such combinations of sounds in memory and select among them by sending Program Change messages on the Global MIDI Channel.**

When you open the Patch Manager from the Modules menu (instead of opening it from the Arrange window, see [page 137](#)) the first of these two MIDI Channels will be used for selecting individual Patches, and the second will be used for selecting "Parent Patches" (depending on which type of Patch the Patch Manager window currently displays). More on this in the Patch Manager chapter.

Child MIDI Channels



Multitimbral instruments receive on many MIDI Channels, and often you can set which Patch (Program, Sound, Preset) each MIDI Channel should use. One Instrument can receive on up to 16 MIDI Channels.

If there is a dedicated driver for a device, the Studio Module knows how many MIDI Channels this particular device can receive on, and displays this. A Korg M1 for example can receive on eight MIDI Channels, and therefore the last eight boxes in the Child MIDI Channel section will be greyed out.

For some MIDI instruments the MIDI Channel settings in the Setup window are fixed, on others you will be able to change them. If one particular instrument has this last option, you can click on the channel buttons and type in the setting that corresponds to how you have your particular instrument set up. Furthermore, for many Devices, the Studio Module can automatically extract the "current" MIDI Channel settings from the Device (see [page 141](#)). If this is the case, it will then not use these Child MIDI Channel settings, but rather the "actual" MIDI Channel settings in the device.

You can also "mute" a Child MIDI Channel yourself by scrolling this value "below" 1.



In the picture above, Child 5 is muted.

For List drivers (see [page 154](#)) which do not correspond to any physical device, you can use the little number field to the right of all the Child MIDI Channel buttons to set how many MIDI Channels a device receives on. If you for example set this to 4, the last 12 Child MIDI Channels will be greyed out.



MIDI Patchbay Settings



To be able to utilise the Studio Module to its full extent, you will need to establish two way communication with all your MIDI Devices. In other words, you will not only have to connect the MIDI Out(s) of your computer to the various devices, but you will also have to connect the MIDI Out of each Device to the MIDI In(s) of your computer.

If you have more than a couple of devices, you will need to get a MIDI Patchbay (sometimes called MIDI Switcher or MIDI Matrix) to set up this type of connection. You connect your computer and all (or some of) your gear to the Patchbay and then use the Patchbay to define what is connected to what. Normally, you can send MIDI Program Change messages to a MIDI Patchbay, which will make it switch between different sets of routings. If you plan to get a MIDI Patchbay specifically for use with the Studio Module, make sure you get one that has this feature.

The MIDI Patchbay section of the Setup window is concerned with the settings of your MIDI Patchbay(s).

Patchbay 1 and 2



You can click on the small numbers to select which of the two MIDI Patchbays you want to edit. The Studio Module can handle two Patchbays “per Device”, for very complex setups. The two check boxes are used to turn them on/off. If you for example only have one, turn the other off. When you check/uncheck, the corresponding Patchbay also gets selected.

Name, Output, Channel and Delay

Although you can have "only" two Patchbays per Device, you can have many more Patchbays in your system. To save you some time when setting up each Device, you can pre-define some properties of each Patchbay you own. The settings that can be defined for a certain Patchbay are:

- Which MIDI Output on the computer the Patchbay is connected to.
- Which MIDI Channel it is on. If the Patchbay does not react to Program Change messages, this should be set to MAN, see below.
- How much Delay (in milliseconds) it needs to switch to a new routing. Some MIDI Patchbays take some time to switch in a new set of connections. You can use this value to specify that time. If you for example set this to 100 (=100 milliseconds, one tenth of a second), the Studio Module will always wait 100 milliseconds after "reprogramming" the MIDI Patchbay until it tries to access the Device that it just switched in.

Creating, Renaming and Deleting Patchbays

- To create a new Patchbay definition, first make the Output, Channel and Delay settings, then click in the Name field and type in a new name – for example "A-880" if you have a Roland A-880. Now, when you pull down the Name pop-up, your "A-880" will appear, and if you select it, the Device which settings you are working on will get those Patchbay settings.



You can define up to 20 Patchbays like this.

- To Rename a Patchbay definition, double click on the existing name, type in a new one and press [Return].
- To Delete a Patchbay definition, double click on the existing name, delete it and press [Return].

Setting Channel to "MAN"

If your MIDI Patchbay doesn't react to Program Change messages, you should set the MIDI Channel to "MAN" (Manual). If you do this, each time a new routing is needed, an alert box will inform you so that you can make the routings directly on the front panel of the Patchbay.

Program Before and After

"Program Before" is the Program number (starting at 1) that makes the MIDI Patchbay switch in the Device you are now setting up.

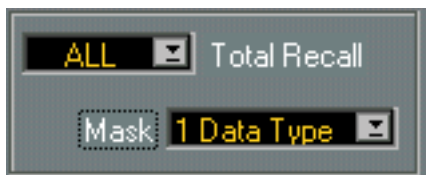
"Program After" is the Program number that will make your MIDI Patchbay switch to the "normal" connection, the one you use for recording into Cubase. Normally you will set all the Devices in the list to the same "Program After" number.

When you perform a Dump, things take place in the following order:

1. **Program Before for Patchbay 1 is sent out.**
2. **Program Before for Patchbay 2 is sent out (if used).**
3. **The actual Data Dump takes place.**
4. **Program After for Patchbay 2 is sent out.**
5. **Program After for Patchbay 1 is sent out (if used).**

If the Channel parameter for either Patchbay has been set to MAN (see above) the Program number will instead be used in a dialog box asking you to change the setting of the Patchbay before/after the dump.

Total Recall & Mask



This section contains two pop-ups. The top one holds a number of "total recall patches" that you can make up. Let's explain this in more detail:

A Total Receive is when the Studio Module gathers settings from many devices in your system and stores them on disk. A Total Send is the opposite. For each Device you can define which of its "Data Types" you want saved. For example, a synthesizer may have Programs (individual sounds), Combis (combinations of sounds) and Global (overall) settings. By using the lower pop-up in this section of this dialog, you can turn on/off the recall of each of these Data Types in a Device. The lower pop-up will always tell you how many of these Data Types you currently have activated for recall.

The upper pop-up can be used to make up different sets of such combinations of Data Types. Up to 16 can be defined. By double clicking you can give each one a name. You should keep the default ALL set that extracts all the settings out of all Devices, which you use every now and then for safety backups. You should also create at least one set for your everyday work which only recalls the most important Data Types. For more info, see the Total Recall chapter.

Options Pop-up



This Pop-up is found below the main setting sections. It contains a number of options which are also set independently for each device:

Extended Setup

If you use a driver which needs additional settings (for example the driver "Generic"), these will be found in a dialog that appears when you select this item from the pop-up. If a particular device does not have any "extended settings" (most don't) this menu item will be greyed out.

Child Suffix

This brings up a list of alternatives on how to name the different "Children" ("multitimbral slots", sometimes called "Parts" or "Timbres") in a multitimbral instrument. This naming will then be used in the Instrument column on Cubase's Arrange Window. Let's say you have an Yamaha SY-77 and select "Child 1" from the Child Suffix menu. When you later assign for example SY-77 Child Instrument number 5 to a Track, the Instrument column will say "SY-77 Child 5" for that Track.

Send without Handshake

Some Devices let you decide if two way communication is needed or not, when sending out settings via System Exclusive. The advantage of turning this off (when possible, if it isn't, this menu item will be greyed out) is that you won't need to make a new setting on your MIDI Patchbay every time you want to send out some settings to an instrument. Since you are only sending out data, not receiving any (a Handshake is a received confirmation message), you can keep using the standard Patchbay connection you have made up for recording. The disadvantage is that you don't get any feedback that the transmission worked correctly.

Include in Instrument Menu

This is an on/off setting used to decide if a device will appear in Cubase's Instrument menu or not. When you have the Studio Module activated, and click in the Instrument column, a list of all Devices in your "MIDI network" appears, instead of the standard Cubase Instruments (see [page 135](#) for details). But you might not want all your devices included in this menu. For example you might want to exclude devices accessed via the driver "Any Dump", since it can't be used to select Patches anyway. You might also want to exclude drivers corresponding to MIDI Patchbays, since you probably won't select Programs for them from Cubase's Arrange window.

Slow MIDI sending

Some devices cannot handle incoming System Exclusive data if the speed of transmission is too fast. If your device “freezes” or displays a “MIDI Buffer Full” error message for example, try ticking this item and try again.

Comment

For each Device you can type in a text in the Comment box. This will be saved in the Setup file in your STUDIO.DAT directory.

OK/Cancel

If you click Cancel, none of the changes you have made in this window this time are stored.

When you click OK, the current settings are saved in the STUDIO.INF file in the STUDIO directory. The information stored is the following:

- All the activated Device drivers and their settings.
- All the settings in the window (including the Mask Settings).
- Everything that is also stored with Save Preferences, see [page 146](#) for more Info.

When adding or removing devices, updating the Setup takes longer than when you only change some settings.

What happens when you add a driver is that it gets copied into the STUDIO.DAT directory. This means that in your STUDIO.DAT directory you will have one file for each device in your rig. Also found in this directory is a file called STUDIO.INF. This contains the settings for your Setup. Make a backup (or two!) of this directory and store in a safe place. Whenever you make a change to your Setup, also make new backups.

In fact, the STUDIO.INF file is so important that whenever you make a major change to your setup, the Studio Module creates a backup copy of it, called STUDIO.BAK, also found in the STUDIO.DAT directory. If you lose or damage your STUDIO.INF file, rename STUDIO.BAK to STUDIO.INF and restart the program. Then check if this file contains all or only parts of the settings you had.

-
- ❑ **Never move any files manually into or out of the STUDIO.DAT directory. Never save any files to it either, especially not Data Dumps.**
-

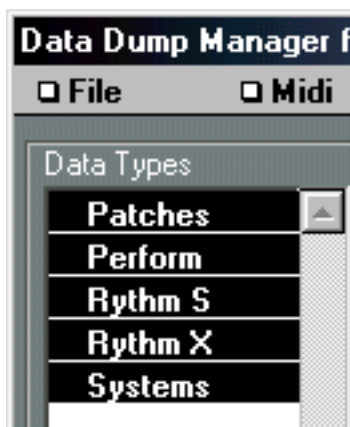
Testing Communications

To test that the System Exclusive communication for a device works as expected, try the following:

1. Close the Setup window. Pull down the Modules menu, select "Studio" and then "Patch Manager...".
2. In the first menu that appears, select your device. If yet another menu pops up, select any option from it.
3. In the window that appears, click the Data Dump button in the upper left corner.



4. The Data Dump window appears. To the left in this window you will find a list of the Data Types in the Device.



5. Click on these until only one of them is highlighted. If you know that some will result in longer dumps than others, select one that results in as short a dump as possible, just to speed things up a bit. However, the procedure will work with any of the Data Types selected).
6. Pull down the MIDI menu and select Receive. This will bring up the data transfer dialog box informing you of the progress of the transfer. If the bar graph and the counter show you that the dump proceeds uninterrupted to its end, all is well (please note that for some devices, the bar graph will not "grow" to the right, but rather jump to maximum size at the end of the dump). If something else happens, check the connections and settings. For help, see [page 152](#).
7. Click Exit and close the Patch Manager window too. If you need to make changes to the settings of the device or if you want to work on the next device, select Setup again from the Studio menu.

Generic Drivers and List Drivers

There are two types of drivers which are not specific to any type of device:

- Generic Drivers. These can be used to send and receive any type of MIDI data.
- List Drivers. These do not send or receive MIDI data at all, instead they are only used to select from predefined name lists.

See [page 152](#) for details.

Generic Drivers

There are two Generic Drivers, called Any Dump and Generic. The first one is used with devices where the only way to make it give away any of its settings is by pressing buttons on the front panel. The "Generic" Driver is more advanced. With this, you can type in System Exclusive codes yourself to create a specialised driver. You can also rename the driver to that of the device you have customised it for. Generic Drivers are described in detail on [page 152](#).

You can add the same Generic Driver to the list several times and give each "instance" of it a new name in the list (probably the name of the Device).

List Drivers

The List Drivers (most often) contain empty cells in the Patch Manager. List drivers are used with instruments for which you either can't, or don't want to collect names via MIDI. An example of a List Driver is the General MIDI one (see Example 2, below) which contains a predefined list of all the Program names in General MIDI compatible devices. But if you yourself have another Device which is not supported otherwise, but for which you would like to select Patches by name, use one of the List Drivers.

The only difference between the different list drivers (found in the Lists directory inside the StudioModuleDrivers directory) is how their patches are organised. For example the LIST2_64 Driver has two Banks of 64 Patches each in the Patch Manager window. This would be used for example with a Roland Juno 106 which organises its Programs in two Banks of 64.

You can add the same List Driver to the list several times and give each "instance" of it a new name in the list (probably the name of the device).

Example 1 – A Dedicated Driver

Let's say you have a Roland A-880 MIDI Patchbay. Its Input and Output 3 are connected to an MPU-compatible MIDI interface in the computer. The A-880 is set to receive Program Change messages on MIDI Channel 16.

Let's also say you have a Korg M1R rack module. This is connected to Input and Output 4 on the A-880.

Here's how to set things up for the Studio Module:

1. **Create a Patch in the A880 for your normal recording situation. This should probably allow some keyboard connected to the Patchbay to send its data via the Patchbay's MIDI Out 3, so that what you play can be recorded in Cubase. The MIDI Out from the computer goes to the MIDI In 3 of the Patchbay which distributes it to the other synthesizers in the system, including the Korg M1R on MIDI Out 4. Store this as Patch 11 (the first Patch in the A-880).**
2. **Create a second Patch where the computer has two way communication with the Korg M1R only! This means the MIDI Out of the computer should be sent to the MIDI In of the M1R, via the Patchbay, and the MIDI Out of the M1R should be connected to the MIDI In of the computer, also via the MIDI Patchbay. Store this as Patch 12 (the second Patch in the A-880).**
3. **Make sure the A-880 really receives Program Change messages on Input 3 and on MIDI Channel 16.**
4. **Set the M1R to receive Program Change messages and System Exclusive messages.**
5. **Set the M1R to some Global MIDI Channel, let's say 5 for the sake of the example.**

-
- ☐ **This is not to be confused with the MIDI Channels that can be set inside a Combi, for each sound. The Global MIDI Channel in a Korg M1R is found among the Global parameters!**
-

Now use the Studio Setup window to set up communications using the information specified above:

1. **Click on Add. In the File Selector that appears, open the STUDIO.DRV directory, the KORG directory, the M1_T1_T3 directory and select the file M_1.DEV. (If no such file exists, you have to quit the program, find the file and copy it to the correct directory). Click OK and the File Selector goes away.**
2. **You will now find a new item in the device list, called Korg M-1. Select it.**
3. **Set both its "Input" and "Output" to "MPU", since the M1R is connected to the MPU interface via the Roland A-880.**
4. **The M1R has no System Exclusive Device ID, so this is greyed out. However, it has a Global MIDI Channel setting. Since the M1R has two modes (Program and Combi) there are two MIDI Channel settings in the Setup dialog. In the M1R, there is actually only one MIDI Channel setting (as stated above) so set "both" these values to 5.**

As you can see, there are eight Child MIDI Channels on the M1. You don't have to worry about their settings though, since the Studio Module will find out about them, itself.

Let's start setting up the Patchbay part of the Setup dialog.

1. Click in the "1" check box at the top of the left column so that a tick mark appears.
2. Set Output to MPU, MIDI Channel to 16 (since the A-880 is set to receive Program Change on MIDI Channel 16) and leave Delay at 100 (this might be a higher Delay value than is actually needed, but you won't notice much difference).
3. Double click in the Name field and type in for example "A-880". This can later be used to select the settings in the point above in one fell swoop.
4. Set "Program Before" to 2 (the second actual Program Change number, the first is 1). This will make the A-880 select Patch 12 when communicating specifically with the M1R.
5. Set "Program After" to 1. This will make the A-880 switch to Patch 11 when done communicating specifically with the M1R.
6. You should now create a "Total Recall patch" that will download at least the Programs and Combis each time you do a Total Recall. Select "New..." from the Total Recall pop-up, and type in for example "Everyday" and hit [Return]. Set up the Mask pop-up to include for example Programs and Combis only.
7. If needed, change any of the settings on the Options menu. You will want the M1R to appear in the Instrument list. You "might" turn off handshake.

This completes the setup for the M1R. To add another device, click Add, find the driver and set it up as before. The Name, Output, MIDI Channel and Delay value of the Patchbay will already be defined so that you can select it from the pop-up.

Example 2 - A List Driver

List Drivers are drivers which are not used to retrieve and send out Data Dumps, "lumps of settings". Instead these are only used to select Patches.

An example of such a driver is the GEN_MIDI driver which is for all General MIDI compatible devices. Since all GM sound modules have the same Patch names, there is no reason to bother getting the names from the device via MIDI.

Let's say you have Roland Sound Canvas sound module.

1. Click **Add in Setup**. Open the **STUDIO.DRV** directory, open the **GENERIC** directory, the **LISTS** directory and select **GEN_MIDI.DEV**. Click **OK**.
2. Select the Driver by clicking on it in the list.
3. Rename the driver. Give it for example the long name "Sound Canvas" and the short name "Canvas".
4. Set the Output to the MIDI Output the Canvas is connected to.
5. Since there is no data to collect from the Sound Canvas, you don't even need to connect its MIDI Out to a MIDI In on the computer. This makes the Input setting redundant. You will just use the driver to select Patches (called Instruments in the Sound Canvas) from the Patch Manager. Therefore, the SysEx ID and main MIDI Channel settings are redundant too. Leave all these settings as they are.
6. The Child MIDI Channels, however, are of great interest. Let's assume you only plan to use the first eight MIDI Channels on the Sound Canvas. If this is the case, set the field beside the 16 Child MIDI Channel settings to 8. This will make only the first 8 Child MIDI Channel settings "available". When you later want to use the Sound Canvas from the Arrange window, there will be these eight MIDI Channels to select from. If you'd rather use MIDI Channel 9 to 16, you can change the channel numbers of those eight Child MIDI Channel fields as shown below.



7. The main routing in your MIDI Patchbay(s) will allow the computer to play the Sound Canvas and to select Patches on its MIDI Channels. Therefore, you don't need to switch in the Sound Canvas specifically to use it. For this reason, turn off both MIDI Patchbays in the upper right corner of the dialog.
8. Since the Sound Canvas isn't used for Total Recall either, you don't have to bother about the Total Recall "patches" either.
9. Pull down the Options menu. The Sound Canvas should be included in the Instrument Menu.
10. Pull down the Options menu again, and select Child suffix. From the pop-up, select the bottom option, "1". This will make the Sound Canvas appear on the Instrument pop-up as Canvas 1, Canvas 2, Canvas 3 etc, in other words, the Short Name plus the MIDI Child number.

Closing

When done with all settings for all devices, click OK.

If you are getting yourself acquainted with the Studio Module, please proceed to the next chapter, "Guided Tour".

Studio Module – Guided Tour

Getting to know the Studio Module

This chapter will show you how to retrieve all the settings in your instruments in one go, and store it all on disk. It will then show you what information the Studio Module was able to extract out of those dumps, and how you can use it to make everyday work in Cubase a lot smoother.

This chapter will talk specifically about devices which you might or not might have. However, what we say about one multitimbral synthesizer will apply to most other multitimbral synths; what we say about one effect unit will apply to most effect units, etc.

1. **First make sure you have set up your devices and have tested them all.**
 2. **Also make sure you have done your homework when it comes to Total Recall "patches". You should have the default "All" setting, plus one more for every day use, which has less Data Types activated for each device.**
 - **The following text assumes that you are currently facing your regular Arrange window.**
 3. **Pull down the Modules menu, select "Studio Module" and from the list that appears, "Total Receive...". If you created a "custom" "Total Recall Patch", another list appears asking you if you want to use that or the default ALL one. Since this is the first time you do this, you should probably select "ALL" to create a full safety copy of all the settings in all devices.**
 4. **A file selector now appears, where you are prompted to type in a name (maybe today's date is a good choice?) and find a location for the file that is being created.**
-
- ☐ **This file might be relatively big, so don't try to store it on an already half full floppy. Do not store it in the STUDIO.DAT directory either. The best alternative is probably to use a directory created specially for your data dumps.**
-

The program will now switch in one device at a time and collect all settings for each one. If your Setup is defined so, you might be prompted to make new MIDI Patchbay settings or to initiate a dump from a devices front panel. If you encounter any problems during this procedure, please look up [page 158](#).

-
- ☐ **This function can only be used when Cubase is stopped.**
-

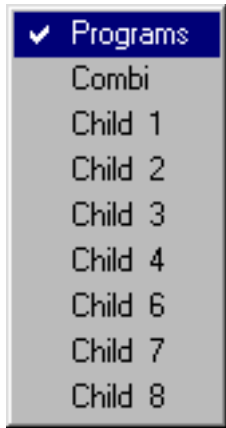
When the dump is done, you return to the Arrange window. Now let's see what the Studio Module has managed to do:

1. Select an empty Track.
2. Press the mouse button in the Instrument column and select "Studio Module Instruments".

A pop-up menu appears listing all your devices.



3. Select one. If this device can handle several types of Patches (see below) yet another list appears.



For a while, let's assume you have a Korg M1. Then this list will contain items for "Programs, Combis and Child 1 to 8" (the eight Programs you can access from within a Combi).

While this naming is specific to the M1, the principle applies to all multitimbral synthesizers, as follows:

- **Selecting Combi will do three things:** set the M1 to Combi Mode, set the Track to the Output of the M1 and the MIDI Channel to the global MIDI Channel of the M1. This way you will be able to select Combis from that Track. A Combi in an M1 is a selection of up to eight sounds (called Programs in the M1) that are each set to receive on a certain MIDI Channel.

- Selecting Program will put the M1 into Program Mode (one Program at a time), and set the Track to the Output and MIDI Channel used to play and select one Program at a time.
 - Selecting Child 1 to Child 8 will set the M1 to Combi mode and make the Track output to one of the Programs in the current Combi. This is the most advanced and powerful option, so let's leave it for a while. It is described in detail on [page 141](#). You can of course try it if you want it, the only trick is to get the MIDI Channel setting right. If you have a multitimbral synth which always receives on a fixed set of MIDI Channels, this option will work as expected right away. The specific thing about the M1 (and many other synths) is that the user can set the MIDI Channels in the Combi him/herself, which makes things slightly more complicated.
4. To keep things clear for now, select the option that lets you play a single sound on your synthesizer. On the M1 this would be "Program".
 5. Click the Patchname pop-up in the Inspector. This launches the Studio Module's Patch Manager (if the device has Patches, otherwise the Data Dump window appears. If this happens, click Exit and try again with another device).

KORG M-1 - Programs

Data Dump

Function

Devices

Main

Aux

Off

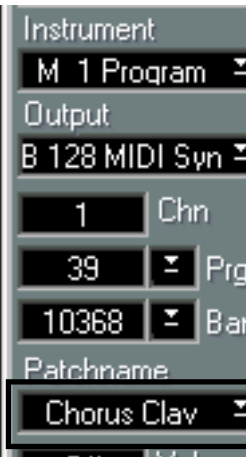
INTERNAL

RAM CARD

ZOOM	A	B	C	D	E
0	Universe	Dream Pad	Magician	Cloud Nine	Good & Bad
1	Piano 16'	MagicPiano	Piano 8'	Clav	Digital 2
2	Brass 1	Solo Sax	Overture	Tenor Sax	Mute Trp.
3	Ooh/Ahh	Choir	Angels	Voices	Stratos
4	Guitar 1	12-String	Sitar 1	RockGuitar	Sitar 2
5	BottleBell	Kalimba	Tubular	WindBells	Flexatone
6	Fretless	Δ Bass	Slan Bass	SynthBass3	Digital 4

- In the Studio Module we call individual settings in a device Patches. A Patch can be a sound, a collection of sounds for a multitimbral setup, an effect setting in a reverb, etc. The definition is: any individual setting that can be selected via MIDI using Bank Select or Program Change messages, or in some cases, System Exclusive messages. In your equipment, a Patch might be called Program, Voice, Tone, Timbre, etc. No two manufacturers seem to have the same naming...
- The Patch window will display all the Patches in the device you have selected for the Track, by name (if the device uses names) in rows and columns. These names were extracted out of the device during the Total Recall. By clicking on one of them, the corresponding Patch gets selected in device, and you can try it out directly by playing your keyboard as you would normally when recording into Cubase (make sure you still have that same Track selected!). Furthermore, the Track will now be permanently set to play this Patch, until you change this. Let's have a look at this:

6. Close the Patch Manager, so that you return to the Arrange window. There are two ways to display the Patch selected for a Track: you can open the Inspector and check the Patchname field when the Track is selected (do not select any Part!).



7. You can also click the “heading” in the Instrument column, which opens a pop-up menu. Select "Patchname" from the menu, and a column is added to the left of the Instrument column which displays the selected Patch for each Track (you have only selected a Patch for one Track yet!).
8. If you wish, you can create another Track or select a new empty one. Then click in the Instrument/Patch column to select a device for that Track and double click to see all the available Patches for this Instrument.

When you are in the Patch Manager window, take the time to try out two other features:

- If the memory in your device is divided into Banks (each Bank contains a number of Patches), this will be indicated by a row of Bank buttons to select from.



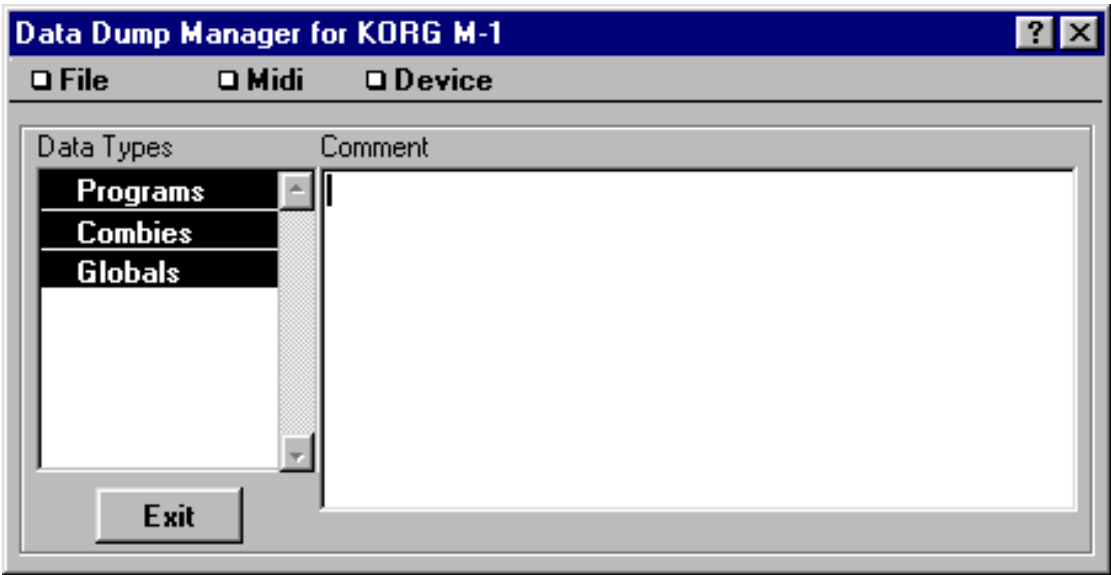
- Although Memory Cards are supported, they require some special handling. For more details, see [page 121](#).
- A Patch can be renamed by holding down [Alt] and double clicking on a name (just as a Part), assuming the device supports renaming. This does not send out the new name to the actual device, you have to do that specifically (see [page 116](#)).

- By using the pop-up Goto menu (or the up/down cursor keys on the computer keyboard) you can pass between the Tracks that you have assigned Instruments to, and the Patch Manager will get updated and show the available Patch for each Track.



- If you double click on a Patch, a Macro Editor will be opened, if one exists for this particular device. Here you can make adjustments to the Patch. The details can be found on [page 131](#).

Finally, let's have a brief look at the last window in the Studio Module, the Data Dump Manager. This is accessed by clicking on the Data Dump button at the top left in the window.

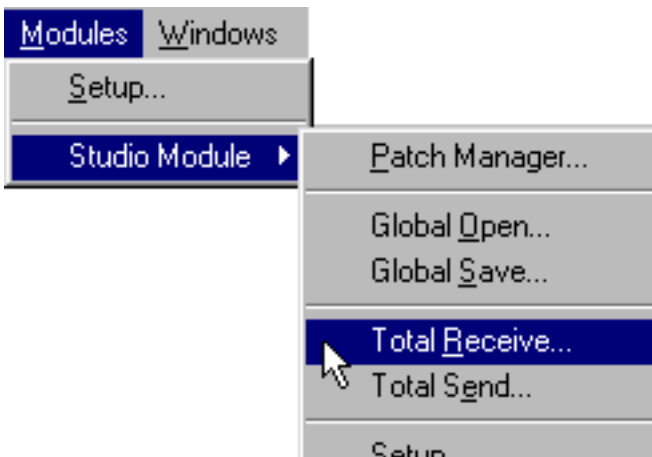


In this window you can get and send data from individual devices. If you for example changed some setting using the front panel of your synthesizer, you can update the Patch Manager by selecting this device from the device menu and then select "Receive..." from the pop-up MIDI menu. Close this window by clicking the Exit button.

Following these instructions you have barely scratched the surface of all the possibilities this ingenious piece of software offers! Please read through the following chapters at least once and try out the possibilities in each section.

Studio Module – Total Recall

The Total Recall functions are accessed via the pop-up menu which appears when you select "Studio Module" from the Modules menu. Total Recall is an operation where you can get and retrieve all the settings in all your devices, in one go.



Total Receive

This procedure is very simple, just select "Studio Module" from the Modules menu and then "Total Receive".

1. If you have defined your own Total Recall "patches" (see [page 90](#)), a menu will appear allowing you to select one of these.
2. After this a file selector appears allowing you to define the name and location of a Global File (it has the Extension ".MEM"). If the data you are collecting belongs to a certain Song or project, give the file the same name as the Song/project (the ".ALL" file), since this will allow you to have the sounds automatically sent out when you load the Song, as described below.
3. The Studio Module will now retrieve all the settings and store them on disk, one device after the other.

❑ This function can only be used when Cubase is stopped.

All the settings of all the devices get stored in one single file. However, you can "replace" and "extract" settings for individual devices into and out of this file. See [page 144](#).

You can stop the operation at any time by pressing the [Esc] key for a second (the current dump has to finish before the dump is aborted).

Total Send

A Total Send is the opposite to Total Receive. In this case settings are read from disk and sent out to all the devices in the system.

If you have defined your own Total Recall "patches" (see [page 90](#)), a menu will appear allowing you to select one of these. Then you will be asked for a Global File to send out.

Only the Data Types (see [page 169](#)) that are actually in the file will be sent out, others will not be affected. An example would be the Yamaha SY-77: If the file contains no Tuning and Pan data, only Voices and Multis, the Voices and Multis in the SY-77 will be affected, but the Tuning and Pan settings will remain as they are.

You can stop the operation at any time by pressing the [Esc] key for a second (the current dump has to finish before the dump is aborted).

-
- ❑ **It is advised that you only use this function when Cubase is stopped.**
-

Autoload with Song

When you load a Cubase Song with the Studio Module active, Cubase will look for a file with the same name as the song (in the same directory), but with the extension "MEM". If such a file can be found, Cubase will automatically suggest a total upload or allow you to load the names into memory (as with Global Open, see below).

Guidelines

If you have a smaller studio, it will probably be OK to do a Total Receive/Send for each Song. However, if you have many devices in your rig you might be better off only getting/sending those settings that you actually need. This is where the Recall settings in the Setup window comes in. By making up a few different such "patches" you can make sure you only get/send the data you actually need.

Global Open

This allows you to load an entire Global File into computer memory, a file that was created for example using Total Receive.

1. When you select this function, from the pop-up menu which appears after selecting "Studio" from the Modules menu, yet another menu appears asking you which of your Total Recall "patches" you would like to use. The "All" option will load everything in the file. The other "masks" will only load some data, depending on your settings in the Setup window (see [page 90](#)).
2. A dialog box appears asking you if you want to load the actual data that makes up the settings in your devices (Data Dumps) or if you only want to load the names (Names).
 - If you plan to edit using the Macro editor (see [page 131](#)) or if you think you will be copying and pasting data to create new Data Dump banks, you must select Data Dumps.
 - If your devices still contain the same settings as in the Global file, (if you for example are working on the same Song as yesterday), and all you plan to do is select Patches by name, then you can click Names. In other words, for your everyday work, loading just names will often do the job.
3. The file selector appears displaying files of the type "MEM". Find a file and click OK.

If the file is very big and you already have a large Song in memory, you might run out of memory. Try to create a new "Recall patch" which only loads the data absolutely necessary.

Global Save

This saves all the Data Dumps currently in memory (including the Patch Names) as a Global File.

1. When you select this command, which is just below Global Open, a file dialog box appears asking you to specify a file.
2. If you select a file that already exists, you will be asked if you want to overwrite the file or create a backup.

DEF.MEM

If you save a Global File under the name DEF.MEM, and in the same directory as your Cubase program, the Studio Module will automatically load this file when you launch Cubase.

-
- ❑ **Only names are loaded by this function, not the actual settings data.**
-

Studio Module – The Patch Manager

Opening the Patch Manager

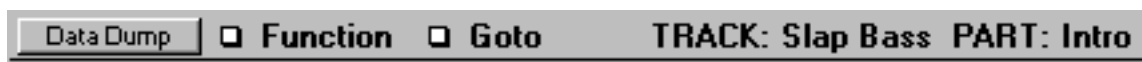
There are several ways to open the Patch Manager:

- By selecting "Studio Module" from the Modules menu, and then selecting "Patch Manager" from the menu.
- From the Arrange window, by clicking the Patchname popup in the Inspector or a Patch in the Patchname column in the Track List.
- By holding down [Ctrl] and double clicking a Part in the Arrange window.

The Patch Manager's two guises

The Patch Manager has two modes, depending on whether it is opened from the Modules menu or from the Arrange window. There are distinct differences to these two modes. The functionality in the window is mostly identical, but your actions lead to slightly different results. The details are referred to later in this chapter and in the chapter "The Arrange Window" on [page 133](#), but the general difference is important to understand even at this point:

- When you open the Patch Manager from the Arrange window, what you see in the window is related to what Instrument you have selected on the Track, and actions in the Patch Manager will affect your Arrangement. You also get a Goto pop-up menu, which you don't when you open it from the Modules menu.



- When you open the Patch Manager from the Modules menu, you do not affect your Song in any way, the Studio Module behaves more like a separate program than a part of Cubase. You will probably use this way of accessing the Patch Manager for house-keeping chores, assembling banks, storing to and getting from disk etc. You get a Device pop-up menu that lets you select between the different devices in the rig (which you won't do if you opened this window from the Arrange window).



- Also, when you open the Patch Manager from the "Modules menu", for some devices you will have more control than when you open it from the Arrange window. For example, with the Roland D-10 you get the ability to select "Tones" for a Timbre (Roland terminology) which you can't from the Arrange window. To find out the abilities of a driver for a certain device, try opening the Patch Manager in both ways and also have a look in the "info" dialog in the Setup window.
 - If a device isn't included in the Instrument menu in the Arrange window, it can still be selected from the Device pop-up in the Patch Manager.
-
- ❑ If you try to open the Patch Manager but the device can not handle individual Patches at all, via MIDI, only complete Data Dumps (as will be the case with some MIDI utility devices) the Data Dump window will open instead of the Patch Manager. See [page 124](#).

Overview

Korg WS - Performances

Data Dump

Function

Devices

> Main

AUX

ON

RAM 1

RAM 2

ROM

CARD

ZOOM	A	B	C	D	E
0	The Wave Song	Song Bells	Whisper Voices	Bottled Air	Stereo Waves
1	Deep Atmosphere	Analog Punch	Vulcan Harp	Rock Stack	Screamer
2	Sting Waves	Cosmic Zone	Quarks	Excalibur	Paradise
3	Metropolitan	Super Clay	Vocalize	Wave Tables	Digital Touch
4	Mini Lead	Toy Box	Gig Split	Bells	Voice & Bell
5	Tack Horns	Analog Brass	Touch Brass	Prophet Horn	Resonant Synth
6	Guardians	Modernesque	Time Piano	Mahogany	RhythmOfTheWave
7	DigitalResWave	Octave Strings	Warm Strings	Round Wound	Introspective
8	Sandman	Glass Tambo	Chilly Kalimba	Digi Harp	Wave Mollet
9	Time Traveler	Vektar	Northern Lights	Motion Mix	StationPlatform

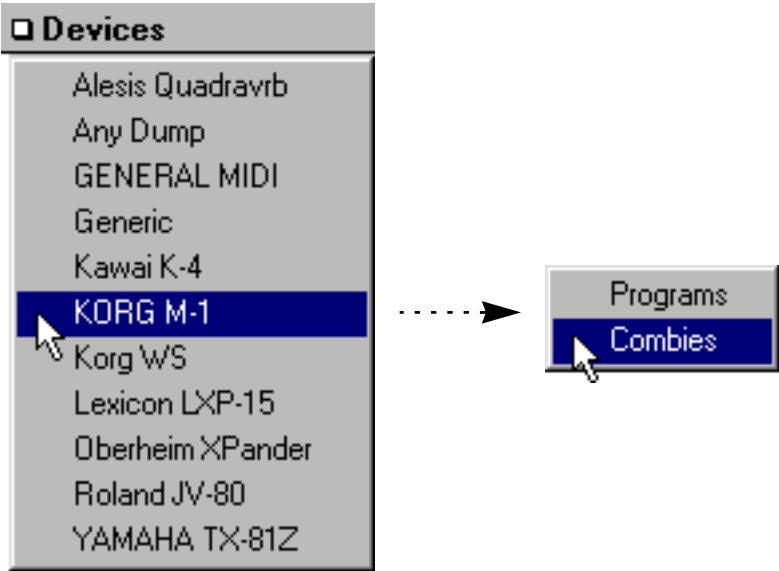
The main part of the Patch Manager window is occupied by the Patch list which is divided into rows (numbered) and columns (alphabetised). The cells might be filled with names, see below.

At the top you will find pop-up menus and information fields for "navigating" the window.

Viewing different Devices/Data Types

From the Modules menu

If you open the Patch Manager from the Modules menu, you use the Devices pop-up menu to view different devices. This lists all devices. If you select one that has several Data Types, a new menu will appear listing those. Select one.



- Please observe that the display may show the device you are interested in, but not the data type you are looking for. For example, in a Korg M1 you might see the names of all Combis instead of all Programs. To change this, use the Device menu to select the same device as you already have, but in the second menu that appears, select the Data type you are interested in.

If you select a device for which there is no Patch window (such as the ANY_DUMP driver), you get the Data Dump window instead.

From the Arrange window

If you open the Patch Manager from the Arrange window, you will already have assigned a device and Data Type to the Track, and the window is then automatically set to display just that.

Patch Names

Many devices name their patches. When the Studio Module receives data from such a device it can extract the names and display them in the Patch Manager.

But even if the device doesn't use names on its front panel (for example, many effect devices don't) the Studio Module will allow you to type in names for the Patches, to make it easier to select between them.

Saving Names

When you save a Data Dump to disk, the names are saved with it. If you have no Data Dump in memory, you won't be able to save the names either, the two always go together. (Well, there is an exception for some rare devices and their memory cards where the names can be saved without the dump. An example of such a device is the Roland R8M.)

Loading Names

There are quite a few ways to load names into memory:

- By performing a Total Receive (see [page 106](#)). When you do this, you collect data and names from the devices in your MIDI rig.
- By using the Data Dump manager (see next chapter). When you get data from one device at a time the names will be collected too.
- When you load a dump from disk. This can be done using Global Open, by using the Functions pop-up in the Patch Manager, or by using the File menu in the Data Dump window.
- You can load names only, (no dumps) by using the Load Names function on the Function pop-up in the Patch Manager window.
- Some drivers have predefined names, which means there will be names in the Patch Manager right from the start (for example the General MIDI driver). This might be the case if the device has Patches that can't be modified or deleted (ROM Patches).
- And as stated above, you can type in names yourself for those devices which don't use names on their front panel.

See [page 144](#) and [page 154](#) for more info.

Patches vs. Names Only

There are two ways to get to a situation where you work with names only:

- When you perform a Global Open, the program asks you if you want to load only the names of the Patches in the file.
- You can delete the Data Dumps, but keep the names, in the Data Dump window, see next chapter.

So, why would you want to do that? The main reason is to conserve memory space (RAM) in your computer. If you are working on a large piece of music you will want to reserve as much memory as possible for your recordings.

If all you want to do is to select Patches by name, then you don't need to have the Data Dumps in memory at all, you can just as well work with names only. There are two ways to achieve this: either you only load names with Global Open when you start your work, or you delete the data in the Data Dump window. This last option comes in handy if you in the middle of a session find out you need more RAM for recordings.

However, there are cases when you do need to have the data loaded too: when you want to be able to send out complete Patches to reprogram a Device (see [page 116](#)) or when you want to use the Macro Editor (see [page 131](#)). And as stated above, to be able to save the name changes, you must have some data in memory to save the names together with.

Furthermore, some Drivers (List Drivers and Hybrid Drivers, see [page 154](#)) can't handle complete Patches at all, only names.

Customising the Display

There are several settings you can do to make the view of the Patches fit your needs.

Zoom



If you click the Zoom label in the upper left corner of the name "grid", a pop-up allows you to select from three different text sizes.

Centre Names

This option on the pop-up Functions menu lets you decide if you want the text in each cell left-justified (no tick) or centred (tick).



Auto Grid Adjustment

Normally (Auto Grid Adjustment off) there is a setting in the driver that decides how many rows and columns the Patches are divided into. The Patch Manager tries to organise Patches as sensibly as possible, depending on how many they are and how they are organised in the actual device.

If you activate Auto Grid Adjustment, on the pop-up Functions menu, the number of rows and columns are instead adjusted after the size of the window. In this "mode", even if you resize the window you will always see all columns (but perhaps not all rows).

Selecting Patches

When you click on a Patch, it gets selected in the device. Well, there's one hitch, and it has to do with the MIDI Channels:

Singles

If you have a device which can only receive on one MIDI channel there's no problem. The MIDI Channel you have entered in the Setup window will be used. This includes old synths and most effect units.

Parents

The same is true for selecting between complete multitimbral setups in a synthesizer (called Parent Patches in the Studio Module), since this is also most often done on the so called Global MIDI Channel, which is the one you have defined in the Setup.

Children

Things get slightly trickier when it comes to multitimbral instruments which can receive on several MIDI Channels at the same time (each MIDI Channel is then called a "Child" in the Studio Module). Let's get into further detail on this:

If you opened the Patch Manager from the Arrange window, the Studio Module stands a good chance of figuring out which MIDI Channel you currently intend to select a Patch for. Hence, when you use this function to set up a multitimbral instrument you should open the Patch Manager from the Arrange window and proceed as described in detail on [page 133](#).

If you open the Patch Manager from the Modules menu, the Studio Module will (if possible) switch your device into a mode where it plays one Patch at a time on one MIDI Channel (the MIDI Channel defined in Setup). If your device is always in multitimbral mode, please beware. The Studio Module will try to select Patches on the MIDI Channel defined in the Setup window, and that could be confusing.

Reprogramming a Patch

If you hold down [Ctrl] and click on a Patch name, the Patch “currently selected in the device” will be reprogrammed with the settings of the Patch you clicked on.

There are a few situations when this is very useful:

- When you have changed the name of a Patch and wish to send out the entire Patch with the new name.
- When you have worked with the Auxiliary Bank (see [page 119](#)) and you wish to re-program the device with the original Patch in the Main Bank.
- When you want to rearrange the Patches in your device.

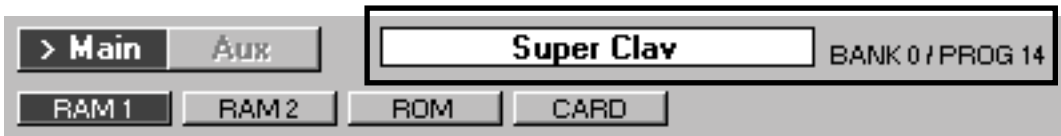
This assumes the device supports reprogramming of “individual” Patches via MIDI. If it doesn't you will have to send out the entire Bank, using the Data Dump window, instead. The Studio Module helps you find out if this is needed. Look at the button called MAIN:



- If there is a ">" sign to the left in the button, the Patches in the window are current with the ones in the device.
- If there is a star at the left side of the button, the Patches in the window are "out of sync" with the device and you will need to use the Data Dump window to send out the entire Bank.

About Program Change messages

The Studio Module usually selects Patches in your devices via Program Change. However, that's not good enough if the device has more than 128 Patches. If it does, some combination of messages is used, for example Bank Select plus Program Change or a combination of two Program Change messages, or even System Exclusive. Regardless, the Studio Module will always allow you to select directly between all the Patches in your device. It even tells you at the top of the window, in a box and beside it, which Patch is selected, and how it was done.



If this line says simply "PROG" followed by a number, only one Program Change was used. If it says BANK # / PROG #, a combination of Bank Select and Program Change was used. If it says SYSEX, System Exclusive messages were used to select the Patch. In some cases for example two Program Change messages were needed, in which cases it says PROG # / PROG #.

- ❑ **Make sure to turn off Program Change tables in your devices, as described in the check list on [page 79](#).**

Parents with Children

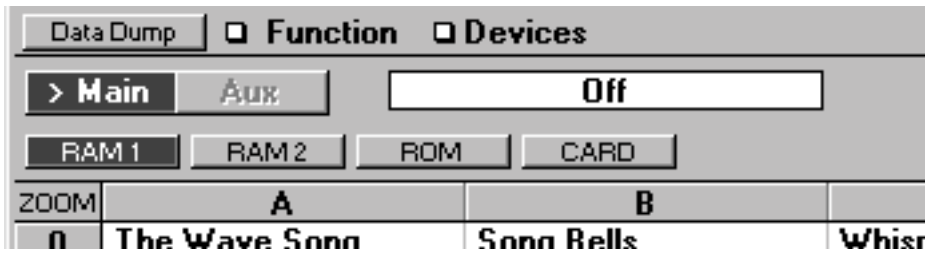
In a multitimbral instrument you often have basic sounds which you combine into multitimbral setups (Parents). As described on [page 166](#) the Studio Module calls the individual sounds in a Parent, Children.

If the Patches displayed in the window are of the "Parent" type, a black triangle is displayed in the upper right corner of each cell. Clicking here brings up a pop-up with the names of the "Child Patches" this "Parent Patch" is made up of. There might also be a "c" (the Child Patch is on a memory card) or an "r" (the Child Patch is in a ROM bank).



Working with Banks

If the Patches in a device are divided into Banks, there will be a number of Bank buttons, just above the grid. You can click on these buttons to view the Patches in the Bank.



If there is a ROM bank of Patches – Patches that can't be altered by the user – the driver will still (often) contain the names for it, so you can select Patches from this ROM Bank anyway. Sometimes these names can be edited.

If there is one or more CARD banks (for Patches on memory cards) these will always be empty (most often it is impossible for the Studio Module to extract data on a card via MIDI). But the Studio Module has a special procedure for getting the names out of the cards automatically anyway, see [page 121](#).

Some devices do not allow selection of Patches on a Card directly via MIDI. In these cases no Card Banks will appear in the Patch Manager or you won't be able to select Patches from the Card bank, only view them.

- ❑ **Similar models of the same make may differ in what Patches are in the ROM banks. Please make sure you select the correct driver. For example, if you have a Yamaha TG-77 (a rack mounted synthesizer) do not use the SY-77 (keyboard synthesizer) driver, even though the two are identical in most aspects.**

Managing Patches

Renaming

If you hold down [Alt] and double click on a Patch, you can rename it (or give it a name if it doesn't have any). This will not change the name in the display in the device, only in Cubase. If you want to send out the name to the device to permanently rename it, hold down [Ctrl] and click on the Patch name. This assumes your device has the possibility to reprogram one Patch at a time (with some devices you must send out the entire bank in one go, see [page 124](#)).

There are reasons to rename Patches in the cells even if you don't send them out permanently. Your device may use short cryptic names and the Studio Module can handle longer names and maybe more special characters. Furthermore, in many effect devices and other "smaller" MIDI devices no names at all are used on the front panel. You can then use this feature to type in names for all or some of your favourite Patches. Saving the Bank will include the names.

For details on names and their File Handling, see [page 145](#).

Find and Find Next

Find, on the pop-up Functions menu displays a dialog box where you can type in some text and hit [Return]. The program then searches through all the Banks for Patches which contain this text. If one is found, this will be highlighted on the screen, and the corresponding Patch will also "get selected in the device". The keyboard command for Find is [Alt]-[Ctrl]-[F].

If you select Find Next or press [Alt]-[Ctrl]-[G], the program searches for the next occurrence of the string you typed when selecting Find.

For example, if you are searching for the perfect piano sound, activate Find and type in for example "pia". You can then use Find Next to quickly step through and audition all sounds with names containing the text "pia".

Editing

Many devices have special Macro Editor definitions as part of the device Driver. To access this, simply double click on a Patch name. The Macro Editor is described in detail on [page 131](#).

Copying and Pasting

You can Copy and Paste Patches between cells (one Patch at a time). If you have the Patches loaded into memory, this will not only copy the settings within Cubase, it will permanently rearrange the Patches within your devices.

Loading and Saving

There's a Load and Save command on the pop-up Functions menu. This allows you to save the Patches you currently see in the Patch Manager as a "Device File", or to fill the cells in the Patch Manager with Patches in a file on disk. For details on File Handling, see [page 143](#).

-
- ❑ Please observe that these options only load/save one Data Type at a time, the Data Type you currently have visible in the window.
-

Working with the Auxiliary Bank

-
- ❑ Before starting to work with the Auxiliary Bank, make sure the Main Bank contains a current set of the Patches in your device, so that you can get them back. This is because when you are using the Auxiliary Bank you are actually reprogramming your devices with new settings.
-

One of the intentions of the Studio Module is to facilitate assembly of new Banks of Patches from Banks you might have on memory cards or on disk. One of the tools for achieving this is the Auxiliary bank.

-
- ❑ You can only use the Auxiliary Bank with devices which support reprogramming of individual Patches, via MIDI. If a certain device doesn't, the Aux button (see below) will be greyed out.
-

You can switch between the main Bank and the Auxiliary one by using the Main/Aux buttons at the top of the window. These will show a ">" sign to the left of the name if Patches are loaded into memory.



The Main Bank will show an "n" if only names are loaded.

The Auxiliary Bank is actually quite different from the Main Bank:

- If you use the Auxiliary Bank with a multitimbral device, please note that it can only handle "Single Patches", that is single basic sounds, not combinations of sounds. However, for effect units etc. which only handle one type of Patch ("single"), it works like the Main bank in this respect.
- The Auxiliary Bank cannot be loaded with names only. It always contains complete Patches (including names if the device supports it).
- When you click on a Patch in the Auxiliary Bank, the complete settings of the Patch is sent out to the device. If the device has a "buffer" – an area of memory where Patches can be put temporarily – it will wind up there. If the device doesn't have a buffer, the current Patch will be reprogrammed with the settings sent out, so beware! (see below for more details).

Opening and Saving a Bank

To load a Bank of Patches into the Auxiliary Bank, use the pop-up Function menu and select Open. The file selector that appears defaults to show only files which contain settings from the devices you are editing. But if you change the extension to ".MEM" you can extract settings out of a Total Recall file. See [page 143](#) for details on File Handling.

The Aux Bank and the Data Dump window

You can use MIDI to get Patches into and out of the Auxiliary Bank, just as with the Main Bank. Just select the Aux Bank, click the Data Dump button and proceed as normal. Switching over to the Data Dump window also allows you to erase the entire Aux Bank.

Sending Out a Patch

When you click on a Patch in the Aux Bank, all its settings are sent out. This can have two effects, depending on the capabilities of the device:

- The Patch is sent to the "edit buffer" of the device where you can try it out directly. This means none of the other Patches will be overwritten, but you if you wish to keep the Patch, you have to manually save it using the front panel of the device.
- The selected Patch in the device gets "reprogrammed" with the settings of the Patch you clicked on. This occurs if the device has no edit buffer.

-
- ❑ From the Auxiliary Bank you do not select between existing Patches in the device, as you do from the Main Bank.
-

The way you would use this feature is when you're hunting for the perfect Patch in a number of disk banks. Just load a Bank, and try out the Patches by clicking on them.

As with the Main Bank, there can be a ">" sign or a star in the Aux button to aid you in finding out if the window is "in sync" with the device.



In Sync



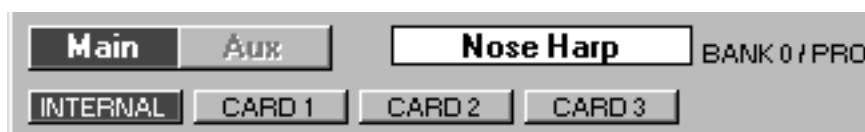
Out Of Sync

If you want to go back to the Patch you had originally, switch back to the Main Bank, and hold down [Ctrl] and click on it. This will send out the settings in this Patch to the device, to reprogram it.

Copying and Pasting

You can Copy and Paste one Patch at a time between the Main and Auxiliary Banks.

Handling Names in Card Banks



This picture shows the Bank buttons for a device with three Card Banks.

The Studio Module does not directly support Patches on Cards, for good reasons. Many devices cannot perform MIDI dumps of data on cards, and even if they can, many cards are of the Read Only (ROM) type, you cannot change the data in them anyway.

However, you will often want to “select” Patches on Cards, and the Studio Module supports this, via its name handling.

Creating a Bank of Card Names

If you have Patches on a Memory Card and would like to get their names into the Patch Manager window, proceed as follows:

1. Use the Data Dump window, to make a safety copy of the device's Patches in internal memory. Save the Bank to disk.
2. Copy the Patches that are on the card into the device's internal memory (the operation manual that came with the device will tell you how to do this).
3. Open the Data Dump window and get the Patches that are now in internal memory in the device, into the Main Bank in the Patch Manager.
4. Pull down the pop-up Functions menu in the Patch Manager and select "Save Names...". In the file selector that appears, type in a file name and save to disk.
5. Select the Card Bank by clicking on the Card button in the Patch manager window (if your device can handle several cards there will be one button for each card).
6. Select "Load Names" on the pop-up Function menu. In the File Selector that appears, located the name file you just created and load it into the Card Bank.
7. Use the Data Dump window to Open the original Patches in the Main Bank that you backed up at the beginning of this procedure, and send them out to the device.
8. Make sure selecting Patches in the Card Bank in Patch Manager works as expected.
9. Use "Save..." on the pop-up Functions menu to save to disk. This will create one file containing “all Patches and names for all Banks”.

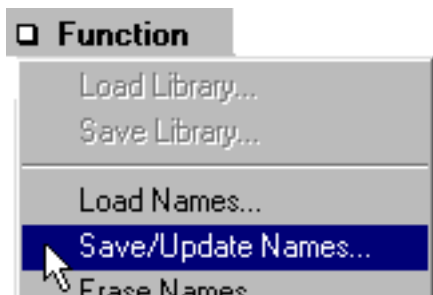
If you have Card names in memory together with data for a certain data type and save the bank to disk, the card names are also saved. Next time you load the Bank, the Card names are retrieved together with the data.

Erase Card Names

This function, on the pop-up Functions menu, is used to clear all names in a Card Bank window.

Save/Update Names

The Save Names function is used with Card Banks, as described above. But, if you have a device displayed in the window which uses names but doesn't handle Data Dumps, the Save Names menu item will switch to saying Save/Update Names.



This will be true for all List Drivers and some specific device drivers, where the device does not allow extraction of names via MIDI.

When you then select Save/Update Names, a dialog will ask you if you wish to:

- Save a separate Name file, as described for Cards above, or...
- Store the names in the device driver, so that the names "always" appear in the Patch Manager when you select this driver.

For info about Name File Handling, see [page 143](#). For more info on driver types, see [page 151](#).

Arrange Window Functions

There are two Functions on the Functions pop-up which are specifically related to using the Patch Manager from Cubase's Arrange window. They are described in detail in the chapter The Arrange window, but here's a summary:

Rename Track/Part

This will change the name of the selected Track/Part to that of the currently selected Patch. This function will be deactivated if you open the Patch Manager from the Module menu.

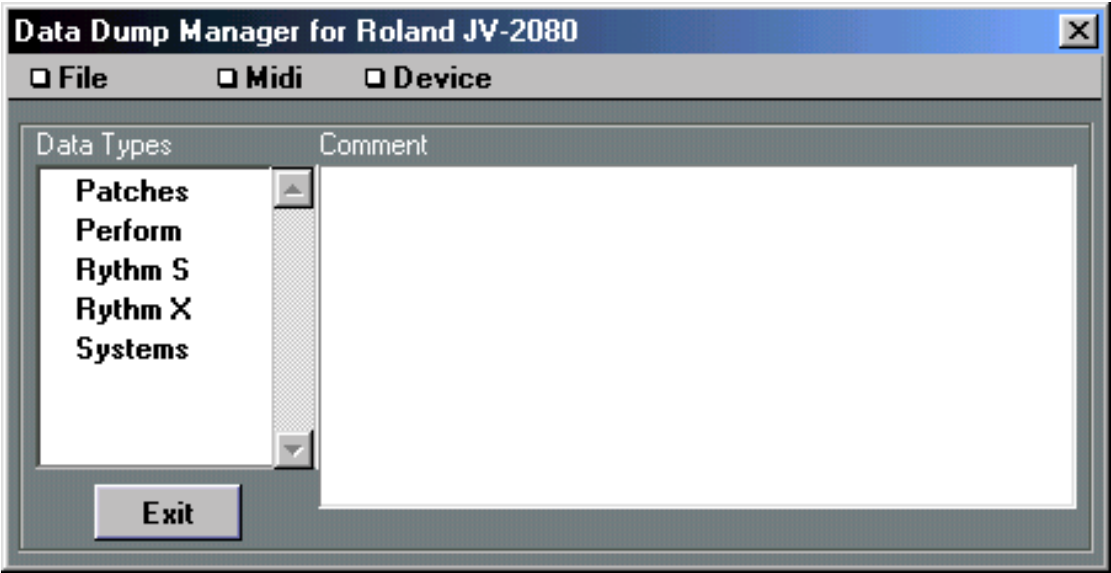
Pass to Track

This will take the System Exclusive data that make up the settings for a Patch and store them in a new Part in the Arrange window. This will not be available for all devices.

-
- ❑ **This function can only be used when Cubase is stopped.**
-

Studio Module – The Data Dump Window

Overview



This window can be opened in two ways:

- By clicking the Data Dump button in the Patch Manager window (see [page 109](#)).
- By trying to open the Patch Manager for a certain device for which no Patch Manager definition exists (this will be the case with some rare MIDI utilities and with the Any Dump driver).

The Data Dump window consists of a “Data Types list” (see below) a Comment box and three pop-up menus.

Devices which you manage via “List Drivers” (see [page 154](#)), do not have any Data Dump window, since these drivers only handle names, not actual settings.

Which Device am I looking at?

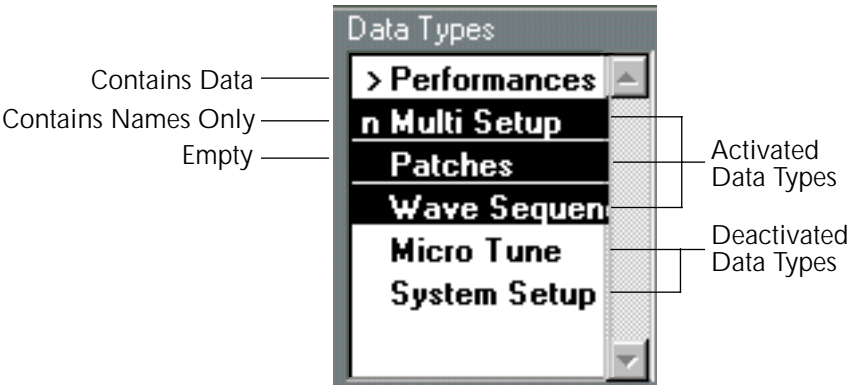
The window title contains the name of the device you double clicked on to open the window. This will be the same device you last worked with in the Patch Manager. If you want to see and work with another device, select it from the pop-up Device menu.

Getting Info about the Driver

At the bottom of the pop-up MIDI menu you will find an item called Info. Selecting this will give you the same dialogs as in Setup, see [page 84](#).

- ❑ **When you add a new device to your setup, check this dialog box for important information.**

The Data Types list



This list contains the names of all the Data Types in a certain device. For example, a Korg M1 has three Data Types: Programs, Combinations and Global Data, which can all be treated individually. A Lexicon LXP-1 reverb only has Effects, a MIDI Patchbay may have Routings, etc. In other words, how many types of data and their naming is individual to each type of device.

When a Data Type is loaded with some data (settings from an instrument), there will be a ">" mark to the left of the type. When the Data Type only contains names (see [page 145](#)) there will be an "n" to the left of the type.

Selecting

The Data Types list is actually a set of switches, allowing you turn the different Data Types on and off for certain operations. Each time you click on a Data Type in the list it will get activated/deactivated.

Purpose

The activation of Data Types is used in the following operations:

- When using this window to transfer System Exclusive data (settings) between the devices and the computer.
- When clearing dumps.

Getting data from the Device

If you want to get the settings from a device into the computer, activate the Data Types you want to retrieve, and select Receive from the MIDI menu. At least one type has to be activated, or there will be nothing for the program to retrieve, right?

While the settings are being transferred, the communications dialog will show up, indicating the status of the transfer. If there is a problem, you will be informed (see [page 158](#)). After the dump, a ">" sign will appear next to the Data Types which have been loaded into memory.

-
- ❑ **This function can only be used when Cubase is stopped.**
-

This type of transfer does not mean the data is stored on disk, it only resides in computer memory. If you don't save to disk, it will be lost when you turn off power.

You can stop the "download" by pressing [Esc]. The process will be aborted right after the current dump is finished.

Sending data to the Device

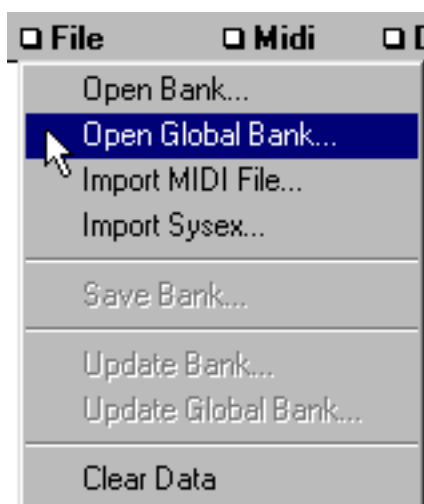
To send some data that you have in the computer, out to the device, activate the Data Types you wish to send, and select Send for the MIDI menu.

For the transfer to work, you will need to have loaded something into the Data Type "slots", either from disk or from the device (loaded slots are indicated by a ">" sign).

While the settings are being transferred, the communications dialog will show up, indicating the status of the transfer. If there is a problem, you will be informed (see [page 158](#)).

You can stop the transmission by pressing [Esc]. The process will be aborted right after the current dump is finished.

Saving and Updating Data



If you have downloaded some settings from a device, you can save them to disk by using the File menu. You can also Update a dump, which means to replace some of its contents with new data.

Select the Data Types to be saved, by activating them in the list. Save or Update from the File menu (the different options are described below). A standard File Selector appears where you specify name and location as usual.

Save...

This saves the file in regular Studio Module format. The file extension depends on the device and on your Setup settings (see [page 81](#)). Saving over a file with the same name deletes the existing file or allows you to create a backup, see [page 144](#).

Update Device File

If you have already saved a file to disk (in Studio Format) you can replace some or all of the data in it. For example, a Korg M1 file can contain Programs, Combinations and Global data. If you have saved all these Data Types in a file, you can replace the Programs only, or the Global data only, by turning on only Program in the Data Type List and use the first of the two Update options on the file pop-up.

Update Global File

The second Update option on the pop-up File menu is identical to the first, except it allows you to replace (not add!) one or more Data Type dumps in a Global (".MEM") file. Everything else is as described above.

-
- ❑ **During any type of Save or Update, do not forget to first activate all the Data Types you want included in the file!**
-

See [page 143](#) for more details on File Handling.

Loading and Importing Data from disk

You can load in data by using the first four options in the pop-up File menu.

First select the Data Types you want to have "filled" with data from the disk file. Only those types activated will be affected by the loading. Then select the type of file to be loaded:

Open Device File

The first option is used to load data from a data file that contains Studio Module data from a single device.

Open Global (MEM) File

The second menu option is used to extract data for a device from a Global File.

Import MIDI File

This loads a Standard MIDI File (type 0), which could have been created in another program, even on another computer.

Import SysEx

Some other programs save "raw" System Exclusive data on disk. Selecting this file type allows you to load such files.

-
- ❑ **Importing MIDI Files and SysEx is not foolproof. The degree of success depends on how the information was stored in the file. The Studio Module does its best to extract as much information as possible. Watch the ">" marks to the left of the Data Types in the list to see which types got imported properly.**
-

Loading only some Data Types

As stated above you can mix and match data from several files (in Studio Module format) by activating/deactivating Data Types in the list. Only those types that are activated when you use Open will actually be loaded, the rest remain intact. This allows you to pick one Data Type from one file and another Data Type from another file.

Mixing and Matching

By using the possibility to extract data from one device (and even one Data Type for that device) together with the possibility to "inject" any Data Type into an existing file, you can build up new Device Files and Global (MEM) files out of existing ones. This allows you to create a combination of data required for a certain project.

Clearing

You can delete data from memory by first activating one or more Data Types (by clicking on them), and then selecting Clear Data from the pop-up File menu.

If one ore more Data Types contain item names, you will be asked if you want to delete only the actual settings data (not in the device, and not on the disk, only in the computer) and leave the names. If you leave the names, you will still be able to select Patches by name in the Patch Manager. The ">" sign beside the name will change into an "n".

-
- ❑ **You cannot save a Bank to disk which only contains names. When you save to disk, Data Dumps and Names have to go together.**
-

Comments

In the Comment box you can type in any text you want associated with the Data Types you plan to save to disk.

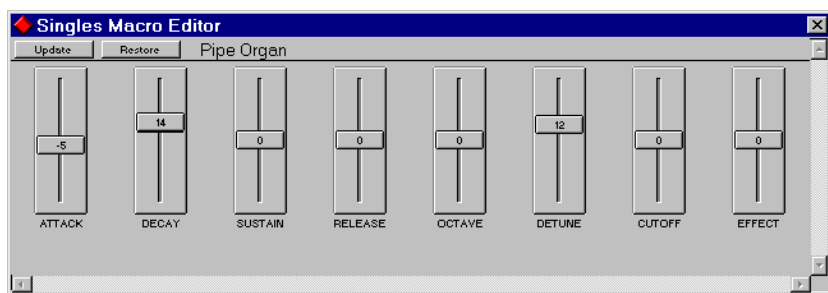
- **Click in the comment box, and type in the text.**
 - **When you save the file, the comment will be saved with it.**
-
- ❑ **Drivers that do not perform any data dumps (such as List Drivers) cannot have any comment, since they don't save anything to disk.**
-

Closing

Clicking the Exit button or pressing [Return] takes you back to the Data Dump Manager, which displays the same device as it did when you opened the Data Dump window.

Studio Module – The Macro Editor

Overview



The Studio Module contains a Macro Editor. "Macro" because it doesn't access every little parameter in your devices. Instead, it gives you a quick and powerful way of changing important properties of for example a synth sound, by adjusting "Attack", "Release" or "Brightness".

To open the Macro Editor, simply double click on a Patch in the Patch Window. If a Macro Editor exists for this device and for the Data Type selected, a new window will open containing a number of faders. These are labelled by function. How many faders and their exact functionality will vary depending of the device, hopefully they will be self explanatory if you know something about the possibilities in your particular device.

The faders' values do not represent the actual settings in the device. Moving a fader up normally means increasing a value from its current setting, and moving the fader down means decreasing it.

The fader you moved last can also be "nudged" up and down using the [↑] and [↓] keys and set to 0 by pressing [Home].

Update

If you have made any changes, you can make them permanent by clicking the Update button. This will permanently change the Patch in your device and reset the faders to their "zero" settings.

Restore

This resets all faders to their middle position.

Closing the Window

Closing the Window with Keep or [Return] will make the changes permanent in the device just as with Update. Using Cancel or [Esc] will close the window without making the changes permanent. If you then select this Patch from the Patch Manager, it will (most likely) return to its old "state".

Studio Module – The Arrange Window

About this chapter

This chapter assumes you are reasonably familiar with the Patch Manager's workings. If you aren't, please read the chapter The Patch Manager first.

About Instruments And Patches

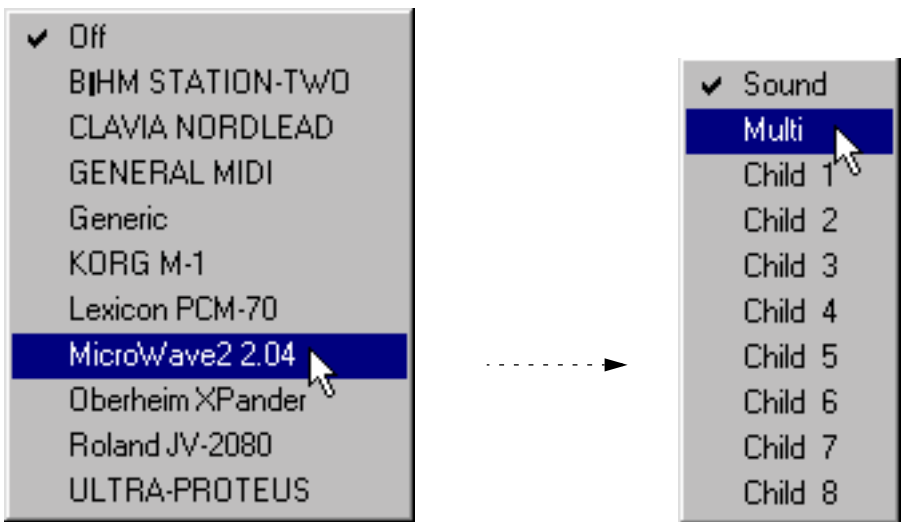
In Cubase an Instrument is an Output and a MIDI Channel, but also “which device” and what “type of Patch” you want the Track to play.

In the Setup Instruments dialog, which is opened by clicking the “Instrument” pop-up in the Inspector, the Studio Module Patchname Source is only available if the Studio Module is activated on the Modules menu. When “Studio Module” is selected as Patchname Source, the Patchname Device pop-up menu contains the currently loaded Studio Module devices. If you select one of these, the Patchname pop-up menu in the Inspector will open the Patch Manager, listing the patches stored in the Studio Module device.

Selecting Instruments

This is done as usual, by pulling down the Instrument popup in the Inspector or by clicking the Instrument column for a MIDI Track in the Track list. A pop-up menu appears listing all your devices, or rather the ones you have set to be displayed in the Arrange window, when you made the settings in the Setup window.

If the Instrument you select has several Data Types to choose from, these will appear on yet another list.



The Studio Module uses the same naming as the manufacturer does in the display and in the manual that comes with the device. However, the Studio Module Instruments are divided into three general categories (if you know the modes of your instrument you will understand what they correspond to):

Single Type Instruments.

If the device only has one type of Patch this is it. Some devices which can receive on several MIDI channels can also be switched to a mode where they receive on one MIDI Channel only. Select this type of Instrument when you want to play a single sound on the device.

Parent Type Instruments.

If you have a multitimbral instrument, where you can store several multitimbral setups, you can set the Track to this type of Instrument. This will allow you to use the Patch Manager to select between different multitimbral setups. It will also make the Studio Module "aware" of how the multitimbral setup is defined, which "Child Instruments" (see below) receive on which MIDI Channels, etc.

If you see the text "(Multi)" after an Instrument category, please look up [page 156](#).

Child Type Instruments.

If you have a multitimbral Instrument, the menu will list these Children, each with a number. These each represent a MIDI Channel in the device.

This terminology is explained in more detail on [page 166](#).

-
- ❑ **Most instruments can only be in either "Single Mode" or "Parent Mode". In this case it doesn't really make sense to set one Track to play the Instrument in its "Single Mode" and another to play it in its "Parent Mode". Please try to avoid this since it will lead to confusion when selecting Patches (see below).**
-
- ❑ **If you select a new Instrument category (Single, Parent, Child) for a Track, all Parts and the Track will be set to "No Patch", in other words, the Track/Parts will no longer be set to play any particular Patch.**
-

If you happen to open a Song where a Track has been set to play a device which is not in your Setup, the field "Patchname Device" in the "Setup Instruments..." dialog will show a question mark next to the unknown device. See [page 147](#) for more info.

Please note that you don't have to use all the Children ("multitimbral slots") in a device if you don't want to. In Setup you can define yourself how many and which MIDI Channels in a device you want to use, by turning off (muting) some Child MIDI Channels. This will also make the Instrument pop-up shorter and less cluttered.

Auto Extraction of Channels

Some multitimbral Instruments always receive on the same set of MIDI Channels (for example 1 to 8 or 1 to 16). With others there are a number of "slots" which can each be set to play one Patch on one MIDI Channel. To make the Studio Module aware of which MIDI Channels are currently available in such a device, proceed as follows:

1. **Create a MIDI Track. Pull down the menu in the Instrument column and select "Studio Instruments", then select the item that corresponds to the "Parent" mode.**
2. **Select a "Parent Patch" for the Track, as described below. This will make the Studio Module aware of how the MIDI Channels are organised in that particular "Parent Patch".**
3. **Select a new Track. Pull down the menu in Instrument column and select "Studio Instruments", then select one of the "Child Instruments" for the device. This will be indicated by a text followed by a number, or by just a number, depending on how you set things up in the Setup window.**
4. **Now the Track will be set to the correct Output and MIDI Channel automatically.**

Working with Assignable MIDI Channels

Please beware when you have a multitimbral device with freely assignable MIDI Channels. If you set it up so that several different sounds are played on the same MIDI Channel, things will not work as expected. When you later select Patches, all those Children that are set to the same MIDI Channel will be switched to the same Patch, since they will receive the same Program Change messages on the same MIDI Channel (which is probably not what you want).

In fact if you have such a device, we recommend you to set up one "scratch" multi-timbral setup (Parent Patch), where all Children are set to different MIDI Channels (For example 1 to 8). If you run out of channels, turn off the ones you don't think you will use, both in the actual device, and by "muting" Child MIDI Channels in the Setup dialog. You can even make up a DEF.ALL song with this Parent Patch selected on a Track, so that you make sure the device is always initiated to the correct state.

If you follow this advice, the Studio Module will always make sure that when you load a Song, the correct Parent Patch is switched in, and all its "Child Patches" are assigned, automatically.

Selecting Patches

If you have assigned an Instrument to a Track as described above, you can use the Studio Module to select Patches by name. This of course assumes you have used Total Recall or the Data Dump window to extract the names out of your devices. Or that you have typed in the names yourself, or used a driver with predefined names (see [page 154](#)).

-
- ❑ **Make sure no two devices receive on the same Output and MIDI Channel before you start selecting Patches!**
-
- ❑ **Please note that not all MIDI devices allow all types of Patches to be selected via MIDI. For example you might be able to select Patches in one Bank but not another. It all depends on the MIDI implementation of the device.**
-

Patchnames

When you click in the Patchname pop-up in the Inspector or a Patch in the Patchname column, you are automatically taken to the Patch Manager window displaying the Patches in that device. To select one, simply click on it.

The Patchname column will show the name of the Patch the Track is currently playing. In other words, if there is a Patch change somewhere on the Track (see below) this column will display it, updated in "real-time" when you position the song pointer and "during playback".

-
- ❑ **It is recommended to always have Chase Events on the Options menu turned on when using the Studio Module.**
-

With Parts

If you want to make a certain Part play a Patch, you can hold down [Ctrl] and double click on that Part. The Patch Manager opens, just as it does when you click in the Patchname field in the Inspector. This allows you to insert a Patch change somewhere on the Track.

- ❑ Please note that many devices temporarily go silent when they receive Program Change or Bank Select (or any other MIDI message that make them select a new Patch). If this is a problem (if notes at the beginning of the Part get cut off), try using the Pencil tool to lengthen the Part slightly to the left (see Part Operations in the main Cubase manual), since the Patch change occurs exactly where the Part begins.
- ❑ Also note that if a Part starts at the beginning of a Cycle, its Patch will only be selected the first time that Part is played back. If you have a Part in the middle of the Cycle that selects another Patch, the device will have the wrong Patch selected when the program jumps back to the beginning of the Cycle. Please set the beginning of the Cycle (the Left Locator) to an earlier position.



When the program enters the Cycle above, it will play Patch 1. Then, in the middle of the Cycle it will switch to Patch 2. However, it will not switch back to Patch 1 when jumping back to the beginning of the Cycle.

Inspector



The Inspector has an Instrument field and a Patchname field which can be used to select and view the Instrument and Patch of the selected Track. If only a Track is selected (no Part is selected) this works just like when you select a new Patch or Instrument in the Track list columns.

If one Part is selected, you can use the Inspector to make that Part play a specific Patch, just as when you select a Patch from the Part directly, as described above.

- The Patch field will show the name of the Patch for the selected Track/Part.
- The Bank and Prg field will show the Bank Select and Program Change number used to select the Patch. If you click in the field (not on the popup), the Patch Manager opens.
- If a special message (such as System Exclusive or combined Program Change messages) were used to select the Patch, Bank and Prg might show "STU".

About Chase

We recommend you to turn on Cubase's Chase function when you use the Studio Module. If you do, you will always have the right Patches selected in all your devices, regardless of how you Rewind and Fast Forward, etc.

About Freeze Play Parameter

This function, found on Cubase's main Functions menu, will make the Patch Change messages in the Parts/Tracks a permanent part of the MIDI data in the Parts. Read more about the use of this parameter in the main Cubase manual.

No Patch Selected and Global Off

To "undefine" a Track that already plays a Patch so that it doesn't play a certain Patch any more, open the Patch Manager as when you select a Patch, and double click on the selected Patch indicator at the top of the window.



When No Patch is selected (because you haven't done any selection yet or because you have selected No Patch), the Patch column will say "No Patch" for this Track.

You can also "unselect" Patches for all Parts on the Track by selecting "Global Off" from the pop-up Functions menu.

Moving Parts between Tracks

If you move a Part from one Track to another Track that plays the same Instrument, it will play the same Patch as it did on the Track it was previously on. If the Track plays another Instrument, the Part will get the Patch setting of the Track it is moved to.

Selecting Tracks/Parts from the Patch Manager

If you want to select Patches for a number of Tracks or Parts (for which you have already selected the appropriate Instruments) you can do this without closing the Patch Manager in between.

The currently selected Track/Part is shown at the top of the Patch Manager window.



There are two ways to select a new Track/Part:

Goto Next/Previous Track/Part



You can use the pop-up Goto menu or the arrow keys on the computer keyboard (the Goto menu shows you which keys to use). When you have the right Track/Part selected, you simply click on a Patch name and that Part/Track will be set to play the Patch.

-
- ❑ **The Goto menu only lets you step between Tracks that have Instruments assigned to them.**
-

Goto Track's Instrument

You can select Tracks's Instrument from the Goto pop-up. This invokes a list of all Tracks and the Instruments assigned to them. Click on one to display it.

Parents and Children

As described above, when you have a Parent Patch selected on one Track, the Studio Module becomes "aware" of how this Parent Patch is built up, and uses this information for setting the Tracks that are assigned "Child Instruments" to the correct Outputs and MIDI Channels, but it does more than so:

- **If the MIDI Implementation of the device allows, the names of the Children currently assigned in the device will appear on the "Child Tracks".**
- **If you select a new Parent Patch, all the Tracks set to play Children will now be set to play the Child Patches of the new Parent Patch.**
- **When you open the Patch Manager to select a new Child Patch, the Patch Manager will show the Patch the Child currently is set to play, in italics.**

As there is a relation between Parents and Children you will have to observe the following:

- **In Cubase, Tracks are played back from the top down. Therefore, always put Parent Patches "above" Child Patches, so that the Program Change messages (etc.) get sent out in the right order. It might be a good idea to put all the Tracks assigned to Parent Instruments at the top of the Arrange window.**
- **When receiving a Parent Patch change message, some devices for a short while get "immune" to messages asking them to select Child Patches. This is an idiosyncrasy in the device that the Studio Module can't do much about. Playing the Song from the beginning one more time (when the correct Parent Patch is already selected) will probably do the trick.**
- **If you insert Parent Patch changes, make sure you leave a short "gap" before any Parts begin which assign Child Patches, for the same reason as above.**

Using Children without Parents

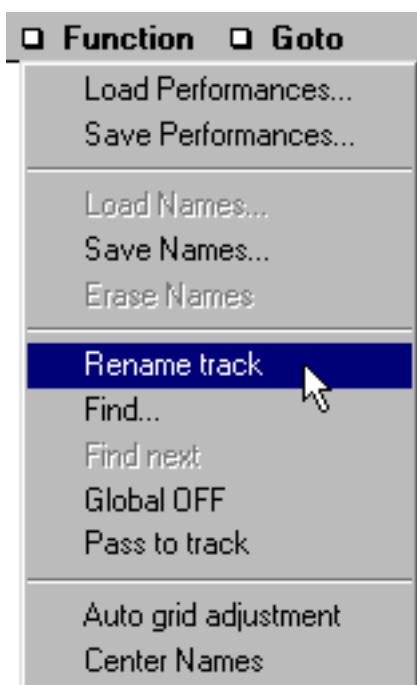
The idea of assigning a Parent Instrument and Patch to a Track is to make the Studio Module aware of how that Parent is made up. But this might not always be necessary. Some devices always receive on a fixed set of MIDI Channels, for example 1 to 8 or all 16), and when you turn them on they are always ready to receive on these MIDI Channels.

If you have such a device, you might forget about using Parents. You can just set up a number of Tracks and assign Child Patches to the MIDI Channels in the device.

The same can be true even if your device has "assignable MIDI Channels" (as above). Just create a Parent Patch manually within the device that receives on a fixed set of channels, and make sure the device always has this Patch ready when you turn on power. This way, you will always have the same set of MIDI Channels to assign Child Instruments/Patches to.

Patch Manager Functions

The Patch Manager's menus are described in the previous chapter, but below follows a description of two items on the pop-up Functions menu which are directly related to opening it from the Arrange window.



Rename Track/Part

This allows you to give the Active Track or selected Part (depending on if only a Track is selected or if a Part is) the name of the currently selected Patch. By using the Goto menu or the arrow keys (see above) you can rename all Tracks/Parts in this way, from within the Patch Manager.

If you take the time to rename all Tracks/Parts with the Patch they are playing, you can set Part appearance to Show Names, and the Arrange window will display the names of all Patches in your song.

Pass Data to Track

If the device you are editing is of the type where you can hold down [Ctrl] and click to send out settings (see [page 116](#)), there is a special function for inserting System Exclusive data for a Patch into the Arrange window.

Pass Data To Track automatically creates a Part on the Active Track, at the Song Position that contains the System Exclusive settings for the selected Patch. This feature can for example be used if you want to save the Song as a MIDI File. If you inject the Patch settings as System Exclusive in the Arrangement, this information will be included into the MIDI File, and the file can be used to program a device with your Patches, even if you play it back from another sequencer or computer.

-
- ❑ **This function can only be used when Cubase is stopped.**
-

Studio Module – File Handling

If you have come this far into the manual you have probably already tried Saving to and Loading from disk. However, we suggest you read through the following paragraphs about the Studio Module's file handling.

File Types

When you are saving and loading data, you will create files with different extensions:

- "Global Files" have the extension "MEM". These are files that contain data from many devices, or at least more than one. Such files are created when you perform a Total Receive, and when you select "Global Save" (on the pop-up that appears when you select Studio Module from the Modules menu). You also work with Global Files when you use Update Global Bank (in the Data Dump Manager).
- "Device Files" contain data for one device only. Their extension depends on the device, as defined in the Setup window. You work with Device files when you use Load and Save in the Patch Manager and when you Open, Save and Update Bank in the Data Dump window.

Prepare yourself for the truth: These files are actually exactly the same. A Device File is actually a Global File that happens to only contain settings from one device. This has the following implications:

- **You can transform a Device File into a Global File by just changing its extension to "MEM" (see below for further details). However, we recommend you to not do the opposite, simply because it might be confusing to you, it might seem as if you had "hidden" data in a file.**
- **When you use the various Open Device File options, you can extract settings for one device out of a Global File by simply changing the extension in the File Selector to "MEM", pressing [Return], locating a file and selecting it.**

Saving vs. Updating

In various places in the studio Module you will be able to "Save" or "Update":

- **When you are Saving, you create an entirely new file containing only what you are now saving. If a file with the same name already exists, that file gets replaced by the one you currently create. A dialog box will warn you about this, and allow you to create a backup file as an alternative. This file will have the same name but it will get the extension "BAK".**

Save commands are found in the Studio menu, in the Patch Manager and in the Data Dump Manager.

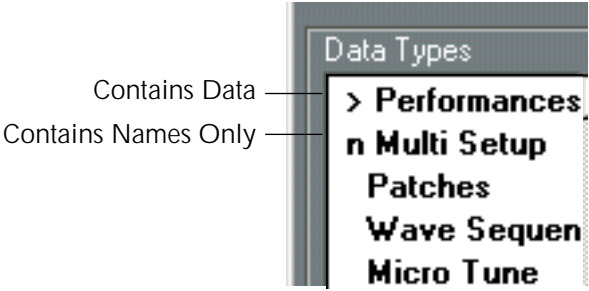
- **When you are Updating you are overwriting only parts of the contents of the file. Let's say you are working on some Yamaha SY-77 Voices. On disk you have a file with SY-77 Voices, Multis and Panning data. If you now Update this file, The Voices will be replaced by the ones you have in computer memory, but the Multi and Panning data will remain as they were. Do not confuse Updating with adding: to be able to update a file you must already have some data of the same type in the file, to replace.**

Names vs. Patches

For a Device you might be able to handle Names, Data or both.

- Most drivers allow you to handle data with names. They can get the data from the device, via a data dump, and extract the names out of this. When you save a Device File or a Global File or when you perform a Total Recall, the names will be saved with the data.
- Some drivers do not manage dumps, but still use names. Those drivers are: all "List Drivers" (including the General MIDI Driver), "preset List drivers" where the only thing the Studio Module can do is select Patches via MIDI and finally drivers which do perform data dumps but out of which the Studio Module can't extract names. For more information about different types of drivers, see [page 151](#).
- In some of these cases you may be able to change the names and some cases not. The general rule is that if the names can't be modified in the device itself, they can't be in the Studio Module driver either, but there are exceptions.
- With the drivers that handle names but not dumps, the names are stored in the driver file itself. Saving is done by selecting Save/Update Names in the Patch Manager, as described on [page 122](#).

In the Data Dump Manager and in the Patch Manager, you will see if a Bank contains data (a ">" mark appears to the left of it) or only names (an "n" appears to the left of it).



Autoload with Song

When you load a Cubase Song, the program will look in the same directory for a file with the same name, but with the extension "MEM". If such a file exists, the Studio Module will automatically propose to either perform a Total Send of the file or to load the Names only.

DEF.MEM

If you save the file under the name DEF.MEM, and in the same directory as your Cubase program, the Studio Module will automatically load the names from this file when you launch Cubase.

Save Preferences

This item, on the Studio Module menu, stores the following:

- All the settings in the Setup window.
- All the Patch Manager's settings: zoom factor and other display options, window positions and sizes, fader positions; all individually for each window and each device. You might use this to for example arrange all your windows as they best suit you and then Save Preferences to always get them this way when you launch the program.
- All file paths, that is, where you last stored a data dump for each device. When you then want to Open or Save a Device File, this disk and directory will be suggested.

❑ **Path names must not be longer than 80 characters!**

When you click OK in the Setup dialog (see [page 92](#)), the Studio Module automatically performs a Save Preferences.

Studio Module – Moving Between Rigs

When you set a Track to play an Instrument, you create a link between the Track and the devices in your Setup. Please note that this is not an absolute link to a certain type of device. For example, just because a Track is linked to your definition of a Roland JD-800, this does not mean this Track will automatically access the JD-800 in any MIDI rig. In other words, you can't just automatically move Songs between rigs, you have to make adjustments to the Setup to get things working properly.

Bringing your Songs to another Rig

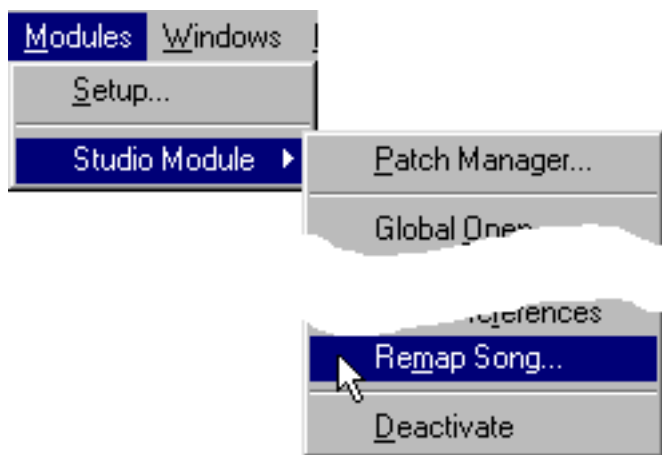
If you're a musician doing studio gigs, you will often be playing someone else's MIDI rig. The Studio Module lets you reprogram someone else's devices with your Patches, relatively easily. You will need to bring not only your Song files, but also your STUDIO.DAT directory to the studio.

1. **Make a backup of your own STUDIO.DAT directory.**
 2. **If you are working on someone else's computer, you will have to replace their STUDIO.DAT with yours. Then, when you make modifications to the Setup it will be a copy of your STUDIO.DAT you are working on.**
-
- ❑ **Make a backup of the studio's STUDIO.DAT directory before you overwrite it!!!**
- **If you bring your own computer, it will of course be your own (backed up) STUDIO.DAT directory you are modifying.**
 3. **Open Setup and modify your settings to fit the rig you are currently working with. Add Drivers if needed, and change SysEx/MIDI Channel settings and Patchbay routings. Close the Setup window.**
 4. **If needed, create a new Total Recall "patch", so that a Total Send only changes what is absolutely needed to change in the rig you are working on.**
 5. **Open the Song you plan to work with and perform a Total Send.**
 6. **When you are done working in this studio, make a backup of the current STUDIO.DAT directory, and store it with your other project files. If needed, restore the studio's STUDIO.DAT directory.**
 - **If you used your own computer, you will need to bring out your original STUDIO.DAT directory and use it to replace the one you currently have on disk, before you start working in your own studio again.**

Someone else's Song on your Rig

If you need to work on a Song that was created by someone else who is also using the Studio Module, there are two ways to go:

Using "Remap Song"



This function (which is found at the bottom of the menu that appears when you select "Studio Module" from the Modules menu) automatically changes the Song to fit as many of your devices as possible:

1. **Make sure you get a copy of the Song file, the MEM file with the dumps for it, and a "STUDIO.INF" file from the person that created the song.**
2. **Load the Song, or perhaps a backup of it.**
3. **Select "Remap Song..."**.
4. **A File Selector appears. Locate the STUDIO.INF file you got with the Song (not your own!), select it and click OK.**

The Studio Module now analyses the Song and the "INF" file and compares it with your Setup. If it finds that a Track is set to play a device that you have, it will change its Instrument setting to match your rig. If it doesn't find a matching Instrument for a Track, it will be set to play no particular Instrument, and all the Patch changes will be cleared for that Track.

5. **Save the Song (under a modified name).**
6. **Use Total Send (see [page 107](#)) to transmit all the settings needed for the Song, to your devices.**

-
- ❑ **Note that you can only call this function once for each Song, or the Instruments will be all wrong (you will be modifying a Song that is now set up for your rig, with someone else's STUDIO.INF file).**
-

While this function does its best to make all the settings in the Song suit your setup, it can't really succeed if a device that was used for the Song does not exist in your rig. To make the deassigned Tracks play some other devices, use the Arrange window's Instrument and Patch settings.

Modifying Your Setup

If you often work with someone else's Songs, you may want to create an alternative Setup that you can use to load these Songs without converting at all. This can be done by modifying your Setup.

1. **Make a safety copy of your STUDIO.DAT directory.**
2. **When you get the Song, also bring a copy of the other person's STUDIO.DAT directory, and use this to replace yours.**
3. **Modify the settings in the Setup window to suit your MIDI rig.**
4. **Load the Song and perform a Total Send.**
5. **When you are done, make a backup of the STUDIO.DAT directory as it is, store it with the project, and "put back" your normal working version of the STUDIO.DAT directory.**

Studio Module – About Drivers

As stated in the Introduction to this manual, drivers are instructions to the Studio Module on how to communicate with a certain MIDI device.

The capabilities of each driver varies with the MIDI Implementation of the device. We try to extract as much functionality as we can out of each device. If something can't be done with a certain device, this is most certainly because the MIDI Implementation doesn't allow it (or makes it enormously complex).

Complete Drivers for Multitimbral Instruments

Most Drivers for "modern" multitimbral instruments will be able to do the following:

- Handle different Data Types separately: Receive, Send, Save to disk etc.
- Set the Instrument to different modes by selecting Instrument categories from the Arrange Window.
- Extract names out of the received data.
- Extract "Child data", like MIDI Channel settings and names, out of "Parent Patches".
- Select Patches (in the device's different modes).
- Macro Edit individual Patches (not implemented for all devices).

As stated above, some pieces may be missing from this puzzle, depending on the device's MIDI capabilities.

Complete Drivers for "Single Mode" Synthesizers, Effect units, MIDI Patchbays, etc.

This will be just as above, only that these devices don't have modes. You get and receive your Patches and select between them and that's that. Normally there are not Macro Editors for effect devices.

"Generic" and "Any Dump"

These two drivers are used when you wish to Receive and Send data, but no specific driver exists for a device.

Any Dump

This driver has ANY_DUMP as a file name and is located in the UNIVERSAL directory in the GENERIC directory among the device drivers that come with the Studio Module.

Any Dump is a pretty simple driver. It assumes the device only supports System Exclusive dumps by pressing buttons on the front panel. By adding it to the Setup list several times, renaming it each time, you can use it with several devices in your rig.

Any Dump does not have a Patch Manager window since it only handles "bulk" Data Dumps. Therefore, if you try to open the Patch Manager for this device, you instead get the Data Dump Window. This driver is best suited for creating "safety copies" of the settings in a device.

Any Dump has four Data Types, so you can receive up to four System Exclusive Dumps in "one go". When you select Receive (see [page 127](#) for details), a dialog appears asking you to initiate the transfer from the device's front panel.

When you are done, press any key. If you have more than one Data Type activated in the list, you will be prompted for the next, until all are done.

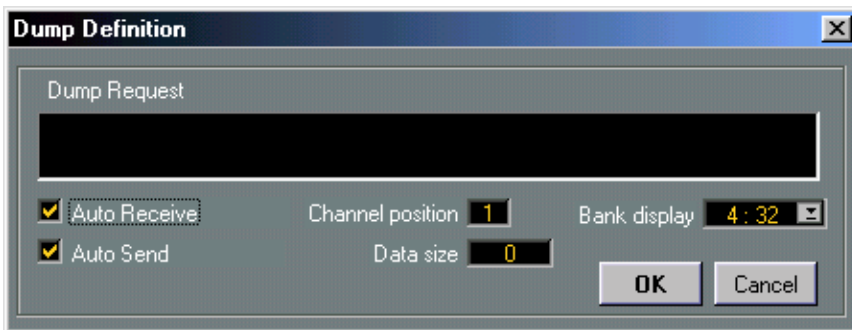
You can then save this data to disk and include it in a Total Send, as with any other Data Dump.

-
- ❑ **Please note that this will only work if the device does not require handshaking. However, if the device supports dumping from the front panel, it probably won't require handshaking.**
-

Generic

This driver allows you to (with a little effort) automate a data dump for a device for which there is no specific driver. The following description assumes you have some experience with MIDI System Exclusive messages.

1. In Setup, make all the settings for the driver, as you would with any other.
 - You can set the number of "Child MIDI Channels" for the device if it is multitimbral. It will then have as many Child Instruments as you define here.
2. Rename the driver to the name of your device. Make up a Short Name and type in a file extension of your choice.
3. Select Extended setup from the pop-up Options menu. The Dump Definition dialog appears.



4. If you wish to create an automatic "Receive" operation, activate the Auto Receive option and fill out the Dump Request, as described below. If you leave Auto Receive unticked, this driver will behave like Any Dump, see above.
5. Click in the text field and type in the bytes that make up the message. Separate the bytes with commas.
 - The message you are trying to create should be a System Exclusive message (beginning with F0 and ending with F7) that makes the device dump some or all of its settings via MIDI. To find out exactly what to input you will have to look in the device's System Exclusive implementation documentation.
 - Note that this assumes a dump can be performed without a handshake. If handshaking is required, this will not work!

6. To define where in the Dump Request message the Studio Module should insert the MIDI Channel specified in the Setup dialog, use the Channel Position value. If you set this to 0, no Channel number will be inserted, the dump will be sent out exactly as typed in. If you set this to any other value, the byte specified will be modified so that the least significant nibble (the right hex character) will be replaced by the MIDI Channel value entered in the Setup dialog.
7. In the Data Size field, enter the size of the dump you will receive. If you don't know this number, you may enter "0", but then you will manually have to "tell" the Studio Module when the entire dump has been received, as with Any Dump, see above.
8. If you want the dump to be sent out automatically during for example a Total Send, activate Auto Send. If you'd rather have the Studio Module prompt you to, for example, manually put the device in a mode where it expects to receive a dump, leave this option unticked.
9. Finally, use the Bank Display pop-up to indicate how your device organises its Patches (this is for selecting Patches from the Patch Manager, see below), in for example one group of hundred Patches (1:100), in four groups of 32 Patches (4:32), etc.
10. Click OK to close the window.

If you used all the features of this driver, it will automatically get data from your device when you perform a total Receive or when you use the Data Dump window to "manually" Receive a dump. It will also be able to send out data during a Total Send.

In the Patch Manager, you will get a number of empty cells, which you can name yourself (after performing the dump! Not before!). Clicking on them will send out the corresponding Program Change message (see [page 115](#)). This will allow you to select Patches by name. Saving the Bank will save the data and the names.

List Drivers and the General MIDI Driver

List Drivers are simply name lists. They do not make use of the Data Dump Window at all. Instead they contain (possibly) named cells used to send out Program Change messages to a device. Use this with devices in which you never change the Patches (maybe because you can't?), but for which you would still like to select Patches from the Patch Manager.

The List Drivers are in the LISTS directory inside the GENERIC directory among your device directories. There are a number of Lists, and their names correspond to how the device organises its Patches, in four banks of 32 Patches (LIST4_32) one bank of 100 (LIST_100), etc.

There are not many settings to be made for a List Driver in Setup. But please note that you can set the number of "Child MIDI Channels" for the device if it is multitimbral. It will then have as many Child Instruments as you define here.

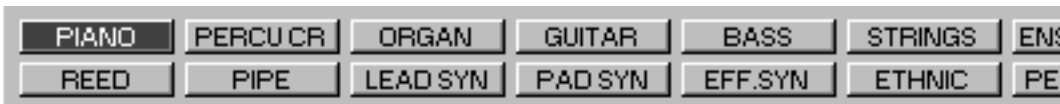
When you access this driver via the Patch Manager, you will see a number of empty cells. Type in the names of the Patches in the device. Use Save/Update Names on the pop-up Functions menu, and select the Update option. This will store the names in the actual driver file.

When you click on one cell, the corresponding Program Change message is sent out. List Drivers do not support Bank Select.

The General MIDI Driver

The driver for General MIDI and GS devices is a list driver. But in this, the names can't be changed. However, it supports the "multiple Child MIDI Channels" option so that you can use it to access Patches on all 16 MIDI Channels of a General MIDI/ GS instrument.

In the Patch window, the Patches for the General MIDI driver are organised into Banks, corresponding to the instrument groups defined in General MIDI.



When you have the General MIDI driver assigned, the Instrument transmitting on MIDI Channel 10 will be labelled "Drums".

Hybrid Drivers and special cases

- Some devices perform dumps but do not extract names (because the device doesn't allow it). In this case, there might be a number of preset names already typed in the Patch Manager cells.
- Some specific drivers are more like Lists Drivers, they allow you to select between Patches, but they do not do any data dumps (because the device doesn't support it). The names may be editable or not.
- If you wonder about naming, open the Patch Manager for a device. Hold down [Alternate] and double click on a cell. You will then note if the name can be edited or not. If the names can be edited, pull down the pop-up Functions menu and check the items. If one says Save Names, then names are saved with the "data" in the Bank. If it says Save/Update Names, this is some sort of list driver. The names are saved (Updated) into the "driver file" itself.

Multiple Parent Modes - the Korg 03R/W and 05R/W

The Korg 03R/W and 05R/W are examples of devices which have two Parent modes. There is first of all a Combi mode where they receive on eight MIDI Channels. This is the mode you should normally use when you want to use them multitimbrally. But there is also a more "primitive" Multi Mode where they receive on sixteen MIDI Channels, which you might want to access.

The Studio Module handles the 03R/W's and 05R/W's Multi Mode like this:

When you pull down the Instrument menu and select the 03R/W or 05R/W, an Instrument category menu appears which lists the possibilities: "Program", "Program (Multi)", "Combi" and "Child".

Setting one Track to the "Program (Multi)" Instrument, puts the device in its Multi Mode.

Whenever you see an Instrument Category with the text "(Multi)" appended to it, it will be for reasons similar to that of the Korg 03R/W and 05R/W.

The Roland D-Series

The Roland D-5, D-10, D-20 and D-110 synthesizers have one idiosyncrasy you should know about:

- The Patches that you select for Children in multitimbral mode are called Timbres. However, Timbres don't have names. Instead, Timbres play Tones, which do have names (but that can't be edited). So, when you click on a cell, you select a Timbre, but you see Tone names (Sorry, if this is hard to grasp...).
- Furthermore, the D-5, D-10 and D-20 do not allow selection of Timbres via MIDI in their multitimbral mode. You will be able to set a Track to the right "Child Instrument", but you won't be able to select a Patch for it. Sorry!
- When opening the Patch Manager from the Modules menu, you can Macro Edit and Rename the Tones.
- You will only be able to access the Macro Editor if you are trying with a Tone in a "RAM" bank that is currently loaded into computer memory.

Card Names but no RAM Data

Some very rare devices have no data associated with a certain Data type, but still, there will be card names to select from (the only case known, as of this writing, is the Roland R8-M). In this case, only names will be stored with a Data Dump when you save it to disk.

Studio Module – Troubleshooting

The following sections try to list problems that might appear in different sections of the program.

General

The system locks up and the mouse can't be moved

You have probably created a MIDI loop, where data coming out from the computer somehow is infinitely fed back to its input. Try unplugging cables, reprogramming the MIDI Patchbay and turning off "MIDI Thru" in your devices.

MIDI error in device

If for some reason, you get a MIDI Error message in the display on one of your devices, you must "reset" it before you can go on. This is probably most easily done by turning the unit off and then on again after a few seconds, but please note that this might make you lose settings that have not yet been permanently stored in the device.

Problems when using an MPU compatible interface

We strongly recommend you to use the MPU driver written by Steinberg and included with the Cubase, rather than the one provided with Windows.

Total Recall and Data Dump

No contact with device or device refuses to send /receive data dumps

If you don't get any contact with a device this could be for a number of different reasons:

- The Setup window is set to the wrong MIDI Output/Input.
- The Setup window (or the device) is set to the wrong MIDI Channel/ID Number. Please note some devices have more than one MIDI Channel setting that must be correct.
- The device is set to "System Exclusive Off".
- The device is not in the correct mode to react to System Exclusive.
- The MIDI Patchbay is not programmed correctly, or it isn't correctly set up in Setup. Try connecting directly to the MIDI interface (don't forget to redo the Setup settings if needed).
- You may be using the wrong driver file. Some model names are very similar! Do not assume the driver for a keyboard synth works with the rack mounted version!
- The cables are faulty or not connected properly. Check and replace if needed.
- The synth may have an old software version. Check with your dealer that you have the latest.
- Check the corrupt transfers problems below. Sometimes a corrupt transfer may "look" like one where there is no contact at all.
- Try Reset Devices on Cubase's pop-up Options menu.

Corrupt Transfers

If you can't get data to be transferred properly between the Studio Module and the device, ("MIDI Error", "Data Error", "MIDI Buffer Full") check the following points:

- The device could be sensitive to the speed of incoming SysEx messages. Try ticking the "Slow MIDI sending" item on the Studio Setup "Options" pop-up menu, and try again.

- Are you running the data through the MIDI Thrus of many devices? Try connecting directly to the computer's MIDI interface instead.
- Are you using an extra MIDI Interface? Try connecting directly to the interface instead (see below).
- You may be using the wrong driver file. Some model names are very similar! Do not assume the driver for a keyboard synth works with the rack mounted version!
- The synth may have an old software version. Check with your dealer that you have the latest.
- Does your MIDI Patchbay have merging of MIDI data? Some mergers do not handle merging of System Exclusive kindly.
- Try Reset Devices on Cubase's pop-up Options menu.
- Try shorter MIDI cables!

Some Data Type doesn't seem to get included

- When you receive data from a device, from the Data Dump window, make sure all the Data Types you are interested in are activated in the list.
- When you do a Total Receive, make sure you use a "Total Recall Preset" that includes this Data Type for the device.
- When you Send data to a device from the Data Dump window, make sure that this Data Type is actually in memory. It should have a ">" sign to the left of it.
- When you do a Total Send, check that the "Total Recall Preset" actually includes this Data Type. Also check that the file actually contains this data type. If in doubt, use Global Open instead and check in the Data dump window. The Data Type you are interested in should have a ">" sign to the left of it.

Patch Manager

No Patch gets selected in the device

- Is the device set to react to Program Change? Are you positive? There might be several switches for this. How about Bank Select? System Exclusive? (You will be able to see if SysEx is needed to select Patches by looking in the Patch Manager. See [page 110](#)).
- Are you sending on the correct MIDI Channel? Remember that if you open the Patch Manager from the Studio Module menu, Patch changes are always sent out on the MIDI Channel you have entered in Setup, for its Single/Parent Modes.
- If the device can't handle Running Status (if it is very old), turn this off in Cubase.
- If you came in to the Patch Manager via the Arrange window, please see below.

The wrong Patch gets selected in the device

- If the device has a Program Change map, either disable this or reset it to its default value.
- If you came in to the Patch Manager via the Arrange window, check the "Arrange Window" heading below.

Can't open Macro Editor

- Does this device driver have a Macro Editor?
- Do you really have any Patches in memory to edit?

Can't edit name

- Are you sure the device is not accessed via a List Driver or Hybrid Driver?
- If you are using the Generic driver, did you Load/Receive any data yet?

Arrange Window

No Patch gets selected in the device

- Is the device set to react to Program Change? Are you positive? There might be several switches for this. How about Bank Select? System Exclusive? (You will be able to see if SysEx is needed to select Patches by looking in the Patch Manager. See [page 110](#)).
- If the device can't handle Running Status (if it is very old), turn this off in Cubase (see "The Options Menu" chapter in the main Cubase manual).
- Are you sending on the correct MIDI Channel? Check the Track and the text below.

The wrong Patch gets selected in the device

- If the device has a so called Program Change map, either disable this or reset it to its default value.
- Are you trying to select Parents or Children? Check the mode on the device's front panel.
- If you are trying to select Children, do you have a Parent Patch assigned to a Track, so that the device gets put in the right mode and the Studio Module becomes aware of the MIDI Channels in the Parent Patch?

Selecting an instrument sets the Track to the wrong MIDI Channel

- If you set the Track to play a Child, do you have a Parent Patch assigned to a Track, so that the Studio Module becomes aware of the MIDI Channels in the Parent Patch?
- Did you (accidentally) change the Child MIDI Channels in Setup?

A Device doesn't appear in the instrument list

Maybe you haven't activated "Include in Instrument menu" on the pop-up Options menu in Setup?

About Instruments

If I change the MIDI channel or output of a Track, the instrument column is not affected

This is not a malfunction. It wouldn't make sense to switch to another Instrument with the Studio Module.

When I select one instrument, the wrong instrument gets displayed, or:

If I change the MIDI channel or output in a pop-up in Drum Edit, the Mixer or elsewhere (not in the Arrange window), the wrong instrument name is displayed

Both these problems might appear if you have two Instruments which are set to the same Output and Channel. Please try to avoid this.

Error and Alert Messages

Below follows some of the Alert messages in the program, for which you might need some additional information:

- THIS PATCH CAN'T BE SELECTED VIA MIDI.
- THIS PATCH CAN NOT BE EDITED WHEN ASSIGNED TO A CHILD INSTRUMENT.
- SORRY, IT ISN'T POSSIBLE TO SELECT CHILD PATCHES FOR THIS DEVICE.

These are all due to limitations in the MIDI implementation of a device.

- THE STUDIO.DAT DIRECTORY COULD NOT BE FOUND. PLEASE REFER TO THE MANUAL!

The STUDIO.DAT directory contains all your device drivers and Setup settings. Without it nothing works. You will either have to locate it and put it back to its original position or you will have to redo the entire Setup.

- NOTHING HAS BEEN SAVED!
- NOTHING HAS BEEN LOADED.
- SOME SELECTED DATA TYPES HAVE NO DATA LOADED IN MEMORY. PLEASE USE OPEN OR RECEIVE.
- See the heading "SOME DATA TYPE DOESN'T SEEM TO GET INCLUDED" in the Troubleshooting section, above.
- THE DATA DUMP ON DISK HAS A DIFFERENT SIZE. THE OPERATION HAS BEEN CANCELLED.

With some devices the Data Dumps vary in size. The Studio Module is unable to Update a file if the new Data Dump isn't of the same size as the one in the file. Try Saving instead.

- DATA ERROR! MEMORY OVERFLOW.
- DATA ERROR! HEADER NOT FOUND.
- DATA ERROR! WRONG BLOCK NUMBER.
- DATA ERROR! WRONG DATA SIZE.

The MIDI data that you received or loaded was somehow damaged or incomplete. Please try again.

- MIDI COMMUNICATION ERROR. PLEASE TRY AGAIN.
- MIDI CHECKSUM ERROR. PLEASE TRY AGAIN.
- MIDI DATA IS INCOMPLETE. PLEASE TRY AGAIN.
- MIDI DEVICE IS NOT RESPONDING. PLEASE CHECK CONNECTIONS AND SETTINGS.

These messages might appear during a MIDI transfer. See Troubleshooting above.

- THIS PATCH CAN'T BE EDITED (IT ISN'T A 'RAM' PATCH)
- THIS PATCH CAN NOT BE EDITED. IT RESIDES IN 'ROM' MEMORY IN THE DEVICE.

If the Patch can't be modified in the device, you can't edit it in the Studio Module either. Maybe you can copy it to a RAM location first?

Studio Module – Keyboard Commands

Patch Manager Window

KEY	FUNCTION
[↑]	Previous Track
[↓]	Next Track
[←]	Previous part
[→]	Next part
[Home]	Switch between Main and Auxiliary banks
[Ctrl]-[Z]	Undo last operation
[Tab]	Next Patch
[Shift]-[Tab]	Previous Patch
[Shift]-[→]	Next Bank
[Shift]-[←]	Previous Bank
[Alt]+[Ctrl]-E	Rename Patch
[Ctrl]-[C]	Copy Patch
[Ctrl]-[V]	Paste Patch
[Alt]+[Ctrl]-[F]	Find
[Alt]+[Ctrl]-[G]	Find Next
[Escape] or [Return]	Close Window

Macro Editor

KEY	FUNCTION
[↑]	Move last touched fader one step up
[↓]	Move last touched fader one step down
[Home]	Reset last touched fader to 0
[Esc]	Undo all changes and close window
[Return]	Make changes permanent and close Window

Setup Window

KEY	FUNCTION
[Esc]	Close window and cancel all changes
[Return]	Close window & update Setup

Studio Module – Terminology

About this Chapter

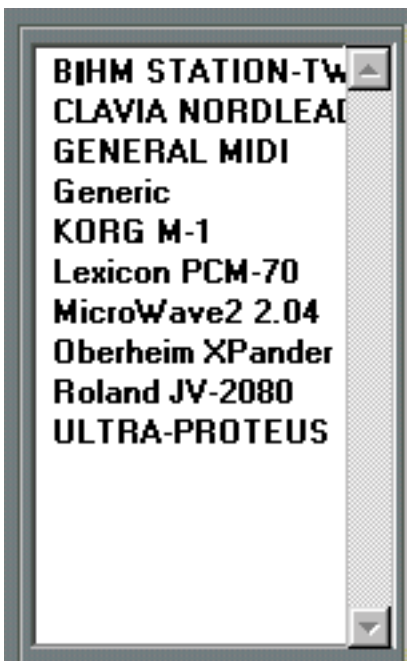
One of the problems with handling System Exclusive data for a large number of manufacturers is that they all structure their data in different ways. And to make things even more complicated, they all use different naming too! This has forced us to create a pretty wide concept of how data is structured in the Studio Module and to invent a set of names for these structures.

Below you will find our concept and the names we use, explained pretty much in detail.

Please note that the meaning of the words below is the way we use them in this manual and in the Studio Module. Other manufacturer's may interpret some terminology differently.

Device

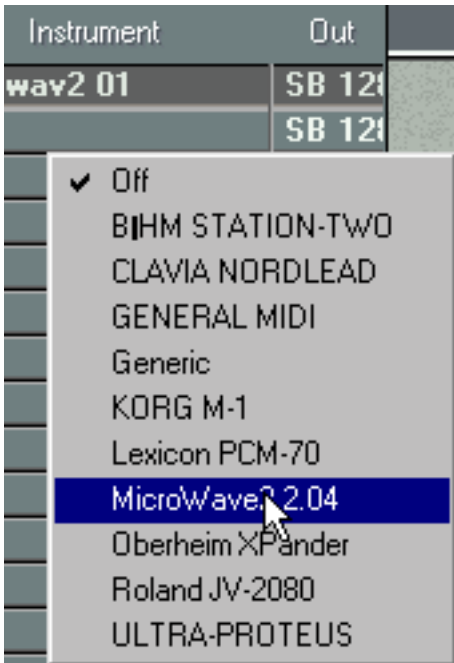
A Device is defined by the MIDI Manufacturers Association to be a "hunk of plastic and metal", in other words, a synthesizer, an effect unit, a drum machine etc. This is also the way the Studio Module uses this concept.



The Setup dialog lists all your Devices

Instrument

This is a Cubase concept, which exists independently of the Studio Module. In Cubase and in the Studio Module, an Instrument defines a MIDI Channel and an Output and which device and patch the Track plays. In the Studio Module you can also define "which mode" it is in (see below). Also, with the Studio Module you don't create Instruments yourself, it puts them in for you.



All your Instruments are found on the Instrument pop-up in the Arrange window.

Instrument Categories

The Studio Module handles three categories of Instruments: Single, Parent and Child, as described below.

Dump/Data Dump

Dump is a verb and a noun. "A Dump" (also called a Data Dump) is data that originally comes from a MIDI device. It normally is a "lump" of System Exclusive data that represents settings in the device. If you know how to decipher these settings (the Studio Module does!), you can find out how the device was set up, how the sounds were programmed, what names were used etc.

"To Dump", means to either get those settings out of the device or to transmit them to it. When you send a Dump out to a device, it normally gets totally or partially re-programmed with the setting that the Dump contains.

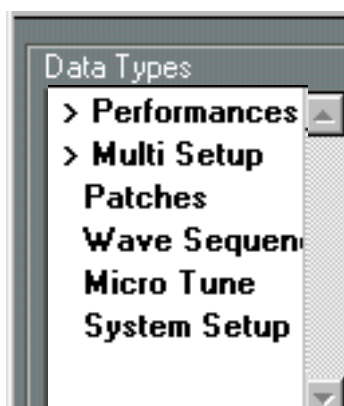
Data Types

The different types of dumps and data structures in a device.

A MIDI device can often do just not one type of dump, but several. Lets take a synthesizer as an example. It might have basic sounds that can be programmed to taste (one Data Type). It might have multitimbral setups, where you can combine those basic sounds into complex setups (another Data Type). It might have effects that can be adjusted separately (yet another Data Type), etc, etc.

Most often, at least in newer MIDI devices, you will be able to perform a dump of each Data Type, separately.

In the Studio Module, the Data Dump window contains a list of each device's Data types. See [page 126](#).



A Korg Wavestation has six Data Types.

Bank

A Bank is a Data Dump that can be broken down into Patches (see below). In other words, a Bank is a collection of settings, for example containing some or all the programmed sounds in a synth, some or all effect settings in a reverb, etc.

When we talk about Banks as they are organised in the actual device, they break down into three main categories:

Ram Banks

These are Banks which the user can modify. If you can change the settings of, for example, a sound in synth, and store it again at the same memory location, it resides in a RAM Bank (RAM is an acronym for Random Access Memory).

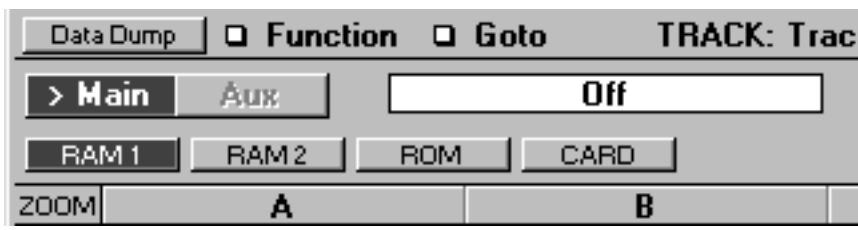
ROM Banks

These are Banks which you can read from, but not save to. Often on, for example, a synthesizer, there will be a ROM Bank of factory sounds which you will be able to use as a basis for your own sounds, (by saving into a RAM Bank) but which you can not modify permanently.

Card Banks

These are Banks that reside on memory cards that you can plug into the device. Card banks may be of the ROM or RAM type, it differs. However, normally you can't do a Data Dump via MIDI of the data on a card. Therefore, the Studio Module has special tools for handling Card Banks, see [page 121](#).

Although there are only these three “types” of Banks, a device might be able to handle any number of Banks, and more than one Card Bank. Banks may also have names.

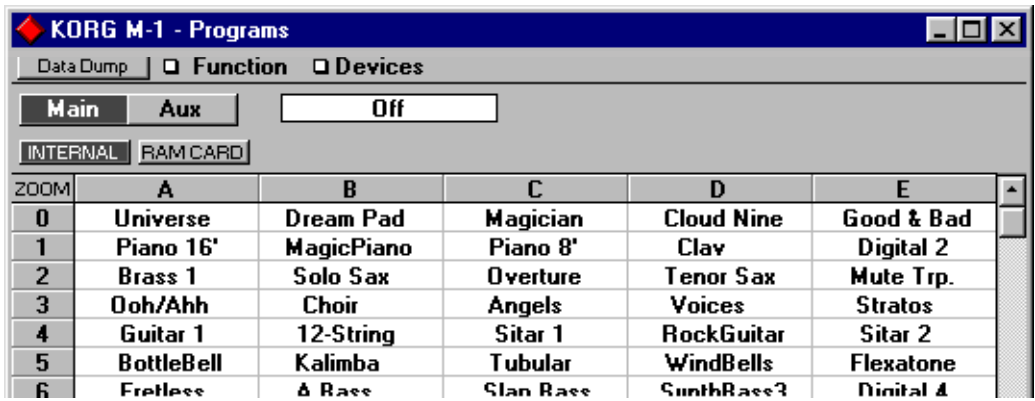


A Korg Wavestation has four Banks.

Patch

A single complete setting in a device, for example: a sound in a synth, a reverb setting in an effect unit, a routing in a MIDI Patchbay etc. Patches can be recalled from the front panel of the device, and can most often be named. On almost all devices you can select between Patches using MIDI Program Change messages.

A number of Patches make up a Bank.



A section of the 100 Patches that make up the Program Bank for a Korg M1.

In many devices there will be several types of Patches, one for each Data Type. In a synthesizer there might be Patches for individual sounds, Patches for multitimbral setups, etc. The Studio Module will let you handle these individually via its Instrument and Patch Categories: Single, Parent and Child.

Single, Parent and Child

These are the three Instrument and Patch Categories. These also correspond to the Data Types and Banks. Let's get into these concepts by starting to talk about Single, Parent and Child Instruments.

When you pull down the Instrument column in the Arrange window and select a device, a new menu might appear with a list of all the Instruments that this device can handle. These Instruments will be divided into the three categories Single, Parent and Child, if the device can handle all three categories. Otherwise as many as applies will be shown. There will only be one Single Instrument (maybe named Program, Voice or Patch), there will only be one Parent Instrument (maybe named Combi, Multi or Performance) but there will be as many Children as the device has MIDI Channels to receive on (if you haven't changed the default setting for Child MIDI Channels in the Setup Window).

Single

When you use the Arrange window (with the Studio Module loaded) to set a Track to play a Single Instrument, the device will be put into a mode where it plays one Patch at a time. In other words, in this mode it will not be multitimbral. Older synths are always in Single mode, they can only play one Patch at a time. Most other MIDI devices (not synths, that is) are also always in Single Mode. As you know, most effect units can only handle one effect Patch at a time, MIDI Patchbays can of course only have one complete routing loaded at a time, etc.

A Single "Patch" is a Patch that a device can play when set to Single mode.

Parent

When a device is multitimbral (when it can play several Patches at the same time) you will probably have the possibility to make up a multitimbral setup and store it in memory as a Patch (although it will probably not be called Patch on the front panel of your instrument). We call it Parent because it takes other Patches (Children, see below) under its wings and guards them...

- Some devices are multitimbral but do not have Parent Patches. These can only hold one multitimbral setup in memory at a time.
- Setting a Track to play a Parent Instrument will put the device in a multitimbral mode (if it has one, or if it isn't always in a multitimbral mode).
- A Parent "Patch" is a Patch that makes the device switch in a complete multitimbral setup.

Child

Parent Patches are made up of Child Patches. When you are setting up a device to play a number of sounds you need for a Song, you are assigning Child Patches to a Parent Patch. There's a very special feature in the Studio Module where when you set a Track to Play a Parent Patch, the Arrangement becomes "aware" of how this Parent Patch is built up and shows you this. See [page 141](#) for details.

How many children a device can access depends on it's capability (how many MIDI Channels it can receive on at the same time, typically 6, 8 or 16). Some manufacturers call Child Instruments "Parts", other call them "Timbres" or "Channels".

The Child Patches available will probably be the same collection as in the device's Single mode.

Studio Module – Writing Your Own Drivers

Those of you who are interested in creating more advanced drivers than those that can be produced by customising the "GENERIC" driver, can obtain the Windows program we at Steinberg use to make all the drivers included with the Studio Module. This program is called DMaker and is free to all Studio Module owners.

If DMaker is not available on the CD where you got your copy of the Studio Module, it can be downloaded from the Steinberg Internet archives: <ftp://ftp.steinberg.net>.